DEPARTMENT OF AGRICULTURE

MYSORE STATE

MYSORE AGRICULTURAL CALENDAR 1938

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4 JULY 1938
INSTITUTE

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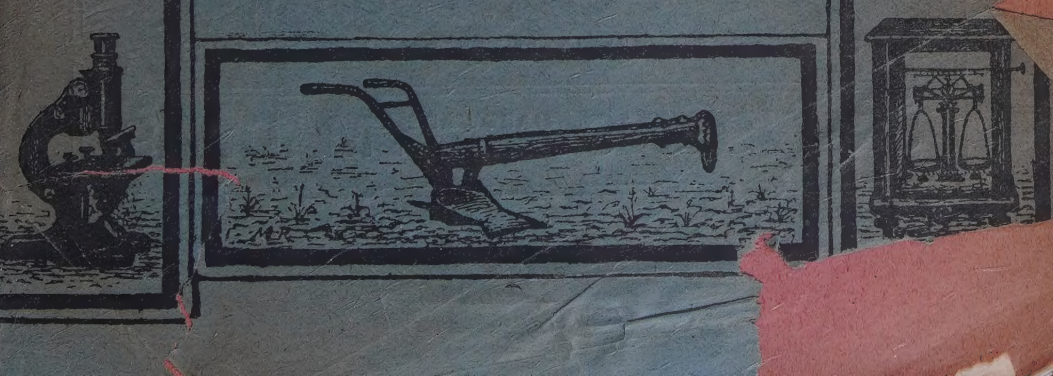

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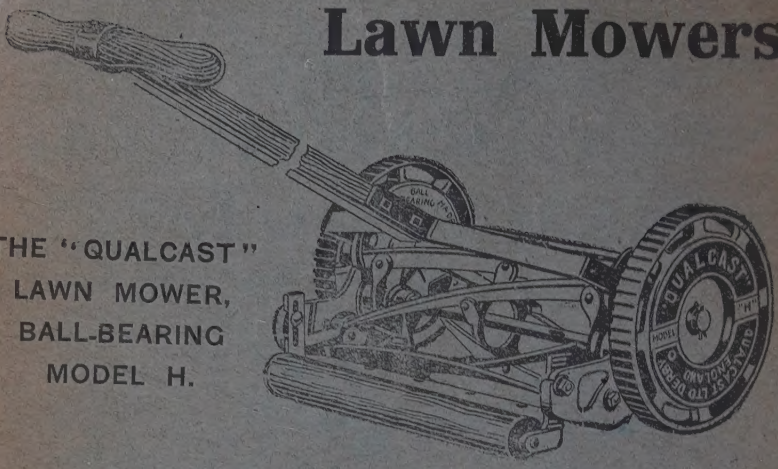

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THE SUPERINTENDENT,
Central Industrial Workshop, Bangalore.

For FRESH INDIGENOUS TREE SEEDS, Etc.,

refer

The CARLTON NURSERIES,

MALLESWARAM P.O., - - (BANGALORE).

GOPALAN.

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Mysore Ploughs

Kolar Ploughs

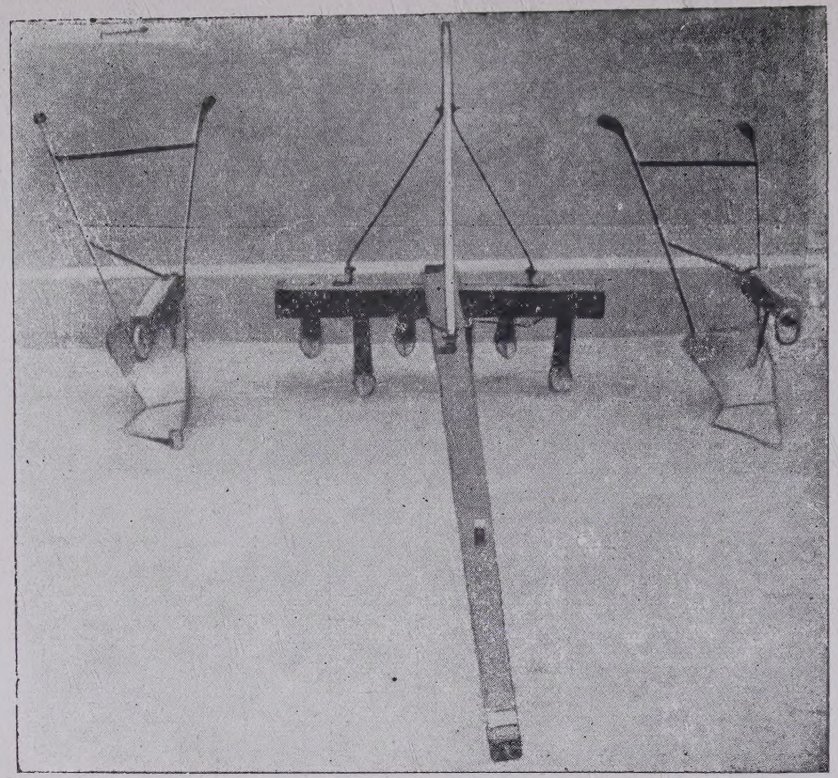
Cultivators

are manufactured in the

Government

Central Industrial

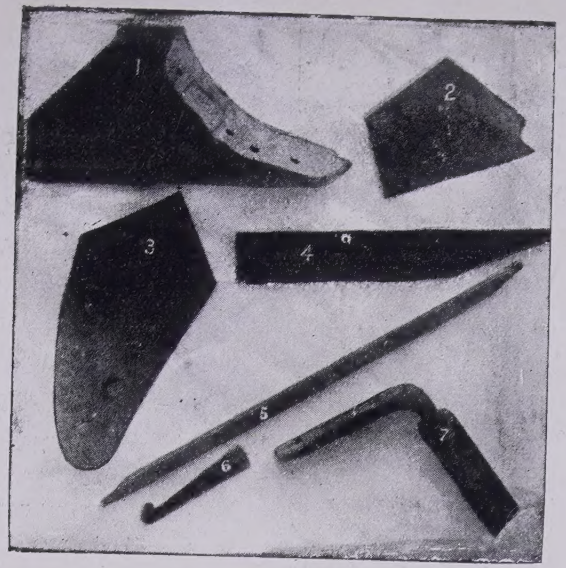
Workshop.



MYSORE PLOUGH CULTIVATOR KOLAR PLOUGH

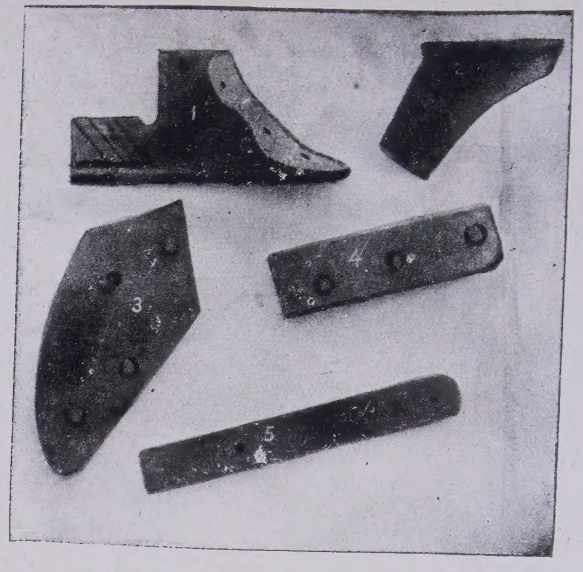
Spares as shown overleaf are also manufactured or stocked in the Workshop.

For cost and other particulars apply to the Superintendent Government Industrial Workshop or The Director of Agriculture Bangalore.



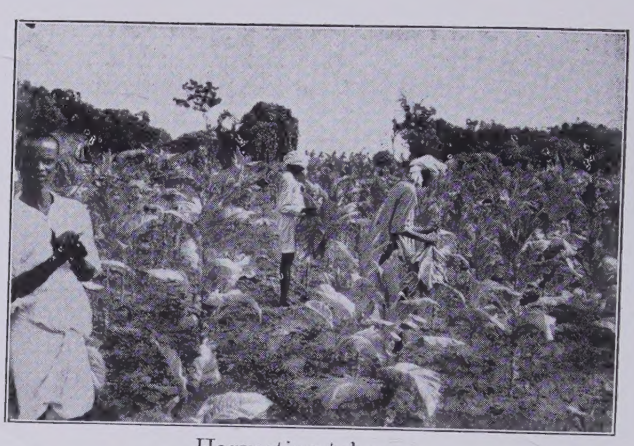
SPARES FOR MYSORE PLOUGH.

1. FROG
2. SHARE
3. MOULD BOARD
4. LAND SIDE
5. BAR POINT
6. KEY
7. STANDARD

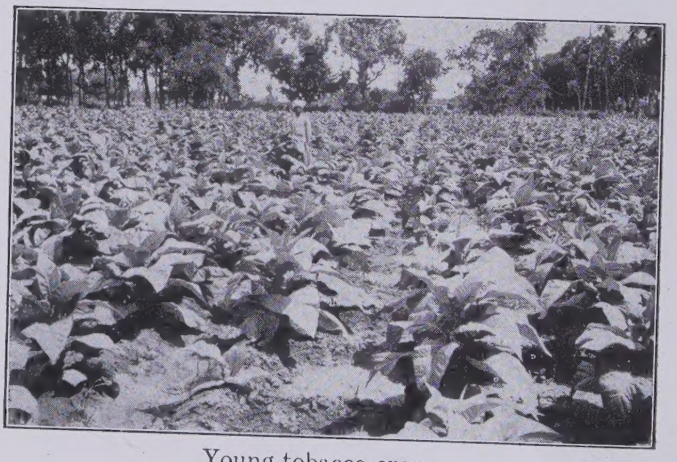


SPARES FOR KOLAR PLOUGH.

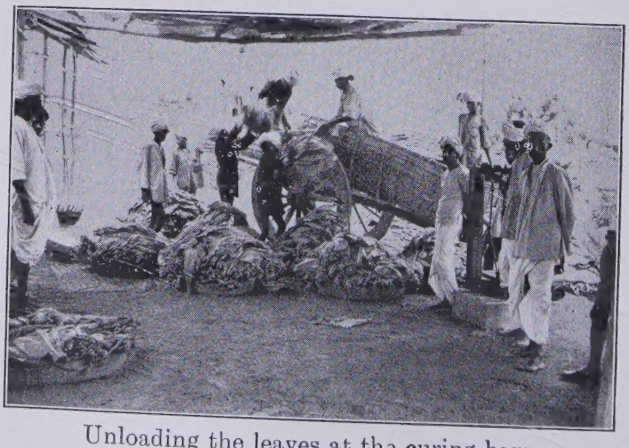
1. FROG
2. SHARE
3. MOULD BOARD
4. LAND SIDE
5. STANDARD



Harvesting tobacco.



Young tobacco crop.



Unloading the leaves at the curing barn.

MYSORE AGRICULTURAL CALENDAR, 1938.

CULTIVATION OF CIGARETTE TOBACCO.

Experiments in the cultivation of bright Virginia tobacco for the last three years have indicated a great future for that crop in Mysore. The production of bright cigarette tobacco in the Empire barely meets even ten per cent of the requirements of the United Kingdom—a very important fact-indicating what a wide scope there is for extension of cultivation of this crop. Though India is the largest producer of tobacco in the world and produces no less than the United States of America, namely, 1,350 million pounds, the United States export 500 million pounds a year as against 27 millions exported from India. The Virginia type of bright cigarette tobacco is extending in the Guntur area which is the largest centre for the cultivation of this variety of tobacco in India. Since the black soils of the Guntur dry area are rich and our soils in the dry areas in Mysore are poor, it has been found that tobacco grown in Mysore is grade for grade superior in colour. The cigarette tobacco grown in the Goribidnur Taluk and in the Irwin Canal Farm in Mandya are considered second to none grown anywhere in India. Our season for the cultivation and flue-curing of tobacco is also earlier than in Guntur. In fact, our curing season ends before January when the curing season commences in Guntur. There seems to be a very wide scope for the cultivation of cigarette tobacco in Mysore.

A brief account of the cultivation and curing is given below.

Tobacco seed of the variety—Harrison's Special—is imported and acclimatised. Raised sandy seed-beds 3 to 4 feet wide are formed with pathways of about the same width. The topmost three inches of soil should be sterilised by burning brushwood. Fertilizer at the rate of $\frac{1}{2}$ lb. nitrate of soda, $\frac{1}{2}$ lb. sulphate of potash and $\frac{1}{2}$ lb. concentrated superphosphate should be applied for every 20 square yards of seed-bed. About two level tea-spoonfuls of seed passed through a seed-separator are mixed with four handfuls of ash or minute sand and sown on 20 square yards of seed-bed to raise sufficient seedlings for one acre of crop. Watering may be done with a garden can with a finely perforated rose. The seed-beds should be kept always moist but not wet. The beds are sprayed once with calcium arsenate and at intervals with Bordeaux mixture. The seedlings grow to the size of four to six inches in eight to ten weeks after sowing of the seed. Well-drained friable soils containing about 70 per cent sand and about 6 to 12 inches deep

ploughed and harrowed to a fine tilth with about 15 to 20 cart-loads farmyard manure would be the best for growing this variety of tobacco. Humus is very important for a good crop.

Healthy seedlings are selected and transplanted at the rate of 5,000 per acre, *i.e.*, three feet apart either way. When the soil is wet after a soaking rain, holes may be made six inches deep, a mixture of artificial fertilizers and soil should be applied and the seedlings transplanted and watered if necessary. Commence cultivation as soon as the transplants are settled and by continued cultivation keep down weeds. When the plants are about one foot in height, the small leaves at the bottom of the plants should be removed. When the requisite number of leaves have developed and while the stem is soft and succulent, the flower-heads should be topped but neither too low nor too high. This is desirable to concentrate the energy of the plant on the leaf and not allow it to be diverted to the production of seed. After topping, about three to four of the lower leaves which are drooping and which touch the ground should be removed. After topping, the suckers should be removed periodically. About two weeks after topping, the leaves begin to ripen from below. The ripening is indicated by the leaves changing in colour from deep green to greenish yellow and in texture from soft and pliable to rough and brittle. Only ripened leaves should be picked and three to five pickings are usually required.

The picked leaves are strung on slender bamboo sticks and arranged tier over tier in the cross-beams of the barn. Barns are usually of two sizes, 16 feet × 16 feet × 16 feet high up to the eaves holding about 3,500 lbs. of green leaves, or 20 feet × 20 feet × 18 feet high up to the eaves holding about 5,000 lbs. of green leaves. The barns are heated by the hot air circulating in the flue-pipes which are connected to the ovens. Fuel and coal are used for the ovens. Flue-curing comprises three processes (1) yellowing, (2) fixing the colour and (3) drying the leaf and mid-rib. The technique adopted in Guntur and till now in Mysore follows the original formula of Mr. Ragland of Virginia taking about five days for curing a load. Recently, the amended formula of Mr. Ragland adopting the process known as 'Sapping' for yellowing the leaf and reducing the period of curing by more than a day has been tried at Goribidnur and Mandya and found promising. Further experiments on the same method are continued to economise the time and expense of curing. The cured leaf is allowed to reabsorb moisture from the air and is bulked and then graded to well-known marketting standards.

There is a keen demand for the cigarette tobacco produced in Mysore and I am glad to state that under cultivation with normal care, raiyats can earn from tobacco four or five times the income possible from any other dry crop. During 1937 a few raiyats earned even more than Rs. 200 per acre by sale of leaves to the Company. It is, however, a crop subject to several diseases and change of quality by change of environment and I cannot too strongly advise the growing of this crop only with the seedlings raised by and under the supervision and guidance of the Mysore Tobacco Company or the Agricultural Department.

With a view to afford help to Mysore raiyats to benefit by the cultivation of this crop, Government have been pleased to encourage and support the Mysore Tobacco Company formed with a capital of

Rs, 10,00,000, and nearly a million pounds of cured leaf was produced in 1937. Any intending grower who desires to have further information may apply to the Tobacco Superintendent, Mysore Tobacco Company, Limited, Bangalore City.

On behalf of the Mysore Agricultural Department, I wish all Mysore raiyats a very prosperous New Year.

T. G. Rama Iyer,
Director of Agriculture.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Thithies in Ghaliges and Vighaliges			Nakshatras in Ghaliges and Vighaliges		
G	1	Saturday	30	18	● Amavasya	... 41	25	Moola	... 19	35
								PUSHYA		
	2	Sunday ...	1	19	Padya	... 46	23	Poorvashada	... 25	50
	3	Monday ...	2	20	Bidige	... 50	42	Uttarashada	... 31	24
	4	Tuesday ...	3	21	Tadige	... 54	1	Sravana	... 36	3
	5	Wednesday	4	22	Chouti	... 55	35	Dhanishta	... 39	29
	6	Thursday	5	23	Panchami	... 56	0	Satabhisha	... 41	39
	7	Friday ...	6	24	Shashti	... 55	15	Poorvabhadra	... 42	36
	8	Saturday	7	25	Sapthami	... 53	9	Uttarabhadra	... 42	17
	9	Sunday ...	8	26	Ashtami	... 50	0	Revathi	... 40	58
	10	Monday ...	9	27	Navami	... 45	48	Asvini	... 38	32
	11	Tuesday ...	10	28	Dasami	... 40	55	Bharani	... 35	29
	12	Wednesday	11	29	Ekadasi	... 35	30	Krithika	... 31	52
	13	Thursday	12	30 Makra	Dwadasi	... 29	42	Rohini	... 27	48
G	14	Friday ...	13	1	Trayodasi	... 23	44	Mrigasira	... 23	34
	15	Saturday	14	2	Chaturdasi	... 17	52	Aridra	... 19	25
	16	Sunday ...	15	3	○ Pournima	... 12	15	Punarvasu	... 15	33
								PUSHYA		
	17	Monday ...	1	4	Padya	... 7	3	Pushya	... 12	5
	18	Tuesday...	2–3	5	Bidige Tadige	... 2 ... 55	30 42	} Aslesha	... 9	14
	19	Wednesday	4	6	Chouti	... 55	29	Makha	... 7	15
	20	Thursday	5	7	Panchami	... 53	48	Pubba	... 6	27
	21	Friday ...	6	8	Shashti	... 53	19	Uttara	... 6	19
G	22	Saturday	7	9	Sapthami	... 54	4	Hasta	... 7	40
	23	Sunday ...	8	10	Ashtami	... 56	14	Chitta	... 10	11
	24	Monday ...	9	11	Navami	... 60	0	Swati	... 13	55
	25	Tuesday ...	9	12	Navami	... 0	9	Vishaka	... 18	46
	26	Wednesday	10	13	Dasami	... 4	33	Anuradha	... 24	32
	27	Thursday	11	14	Ekadasi	... 9	37	Jeshta	... 30	53
	28	Friday ...	12	15	Dwadasi	... 15	5	Moola	... 37	33
	29	Saturday	13	16	Trayodasi	... 20	26	Poorvashada	... 43	56
	30	Sunday ...	14	17	Chaturdasi	... 24	27	Uttarashada	... 49	52
	31	Monday ...	30	18	● Amavasya	... 29	20	Sravana	... 54	47

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
Vriddhi ...	Sarwathra Amavasya. New Year's Day.	Sunrise 6-44 A.M. Cattle Fair at Hassan Town.
SHUDDA.		
Dhruva ...	Rameswaraswamy Car Festival at Tirthahalli.	
Vyaghatha ...		
Harsha ...	Poorvashada rain 3rd pada. Kottarotsava.	
Vajra ...		
Siddhi Vyatipatha ...		
Variyan ...	Poorvashada rain 4th pada. Tulu shasti.	Cattle show, Subramanyaswamy Car Festival.
Parigha ...		
Siva ...		
Siddha ...	Uttarashada rain 1st pada. Kudaravellam.	
Sadhya ...		
Subha ...	Bairahalli Janardanaswami Car Festival. Sarwathra Ekadasi.	
Sukla ...	Uttarashada rain 2nd pada. Mugur Hodae Bhogi Festival.	
Brahma Mahendra ...	Uttarayana Punyakala. Halaganamuradi Venkataramanaswamy Car Festival. Pongal.	
Vaidhriti ...	Mugur Car Festival, Kanu Feast, Ramaswamy Car Festival at Chunchanakatte, Rangaswamy Car Festival at Seringapatam, Rangaswamy Car Festival at Sivasamudram.	
Vishkambha ...	Banashankari Vratha, Rangaswamy Car Festival at Srirangam.	
BAHULA.		
Preeti ...	Uttarashada rain 3rd pada.	
Ayushman ...		
Sowbhagya 1 ...		1 Chunchanakatte, Yedatore Taluk.
Shobana 2 ...	Uttarashada rain 4th pada.	2 Sivaganga, Nelamangala Taluk.
Atiganda 3 ...		3 Nagalmadki, Pavagada Taluk.
Sukarma 4 ...	Birthday of Vivekananda. P. Saturday.	4 Hemmigepura, Anekal Taluk.
Dhriti 5 ...	Sravana rain 1st pada.	5 Hemavati, Krishnarajpet Taluk.
Shoola 6 ...		6 Kyamenahalli, Koratagere Sub-Taluk.
Ganda 7 ...		7 Vokkaleri, Kolar Taluk.
Vriddi 8 ...	Sravana rain 2nd pada.	8 Chennagiri, Kasaba Town.
Dhruva 9 ...	Sarwathra Ekadasi.	9 Harihar, Kasba Town.
Vyagatha ...		
Harsha ...		
Vajra ...	Sravana rain 3rd pada.	
Siddhi ...	Sarwathra Amavasya.	

JANUARY 1938.

MONTHLY NOTES.

PADDY.

Where tanks have received a good supply of water in the rains of the North-East monsoon and on lands under well irrigation the fields will soon be sown with vaishakhi or summer paddy. Transplant your paddy in preference to sowing broadcast. Considerable saving in seed can be effected especially if the seedlings are planted in two's or three's rather than in bunches of several seedlings. The water in the tanks, which in the coming dry weather is liable to much loss by evaporation, can be used economically by this method. Where water has to be raised from great depths, such saving is an important consideration. Transplanting will, moreover give a better yield than broadcasting. If seeds are sown in the nursery at the beginning, the seedlings will be ready at the end of this month for transplanting. The fields should be manured before transplanting. For special manures for paddy, consult the Agricultural Inspector in your place.

RAGI.

Nursery plots for irrigated ragi are prepared in this month and seeds sown.

JOLA.

Sow bilijola on black cotton soil, in tank beds with no water in them and under tanks with limited supplies of water so as to have good fodder for cattle during the dry months.

MANGO.

Mango trees flower about the middle of this month. Look for the hoppers on them and spray Hongey oil soap at the rate of 1 lb. for ten gallons of water.

SUGARCANE.

Sugarcane is planted during this month. Among the indigenous varieties, the pattapatti sugarcane is a very superior local cane both in yield and quantity of sugar present in the juice. But new varieties which are more vigorous and better yielding are now available. These are H. M. 320, H. M. 553, Babbur striped (H. M. 544 striped), H. M. 606, H. M. 607, H. M. 613 Co 281 and Co 290. Some of these arrow from September to January. These should be planted before the end of February. Application for seed setts should be made to the Assistant Director of Agriculture of the Division concerned.

Sugarcane raiyats should lay in a good supply of both organic manures and artificial fertilizers as sugarcane responds well to manuring. Of organic manures, 10 cart-loads of farmyard manure or 3 to 5 tons of compost from habitation or agricultural waste may be used with advantage. A crop of cow-pea or sunnhemp grown and ploughed under would be of great benefit. As regards artificials, 1 cwt. of concentrated superphosphate and 500 to 800 lbs. of sulphate of ammonia in stipulated doses are found to be highly beneficial. Consult the Agricultural Chemist, Bangalore, or your nearest Agricultural Officer regarding the quantity and the time of application of these different manures.

Spraying areca.

A NEW SPRAYER FOR ARECANUT SPRAYING.

In no part of the world is work on plant disease control carried out under such adverse conditions as those met with in the case of arecanut spraying in the malnad. This involves climbing of the tree during the monsoon season to spray the arecanut bunches to protect them against disease. The present practice is for the climber to carry the small sprayer up the tree, spray the bunches within his reach, and jump to the adjacent tree with the sprayer strapped to his back. Each time the sprayer gets empty, it is let down for refilling with the spray mixture and charging. This is naturally a slow and laborious process. With two sprayers in use, a climber can spray 300 trees a day. Nearly 7,000 sprayers of this type are now in use in the malnad gardens. A new sprayer of the Headland type, *viz.*, Primus was demonstrated during July 1937, in 20 villages in Tirthahalli and Nagar Taluks. The outfit is quite simple consisting of a double cylinder with pistons working horizontally, an air chamber, suction hose to take up the mixture and a long spray hose. The long handle provided facilitates the easy charging of the sprayer (Fig. 2). The carrying of the load of the sprayer filled with spray mixture up the tree as now practised is obviated as in this case the climber takes up with him only the long hose. During our trials this year with this sprayer, it was calculated that a climber can spray 200—250 trees per hour. In fair weather, nearly 1,500 trees can be sprayed in a day whereas only 300 trees can be sprayed in a day with two of the small one-gallon sprayers.

Advantages of the Primus Sprayer over the small one-gallon sprayer now in use.

1. It is easier to work than the one-gallon sprayer as the trouble of filling the sprayer and pumping it each time is avoided.
2. Considerable saving of time is achieved. Half the time is spent in filling and charging the sprayer. This is very important as the period of break in the monsoon, when spraying is carried out, is very short.
3. The work of the climber is made lighter, as he carries up the tree only the hose, and not the weight of the sprayer, filled with the mixture.
4. The pressure with which the mixture can be sprayed is greater and more uniform than with the one-gallon sprayer. It often happens with the one-gallon sprayer that the climber has to pump up the sprayer, while on the top of the tree, to get the requisite pressure for spraying.
5. The work turned out is considerably more rapid than with the one-gallon sprayer. 200—250 trees can be sprayed per hour, as compared to 300 trees a day with two one-gallon sprayers.

The cost of this sprayer is about Rs. 70. While the one-gallon sprayer, costing about Rs. 26, is the poor man's unit for arecanut spraying, and has been found to be quite satisfactory. The new Primus sprayer has attracted the attention of average garden owners owing to the rapidity with which spraying can be done. Attempts are being made at present to introduce these sprayers in such villages where spraying is being done on a co-operative scale, so that the higher cost of the sprayer can be met by joint resources.

IMPROVEMENT OF VILLAGE GOMALS.

Almost every village in the State has its Gomal or common grazing ground for the village cattle. Most of these gomals are in such poor condition that their grazing value is almost negligible. Suggestions have at times been made that the gomals should be parcelled out among the villagers and permission granted to put them under ordinary arable crops.

Is it desirable to allow these gomals to disappear in the manner indicated above is a question that deserves serious consideration. Live-stock improvement as an integral part of a scheme for an all-round development of our rural conditions is fortunately receiving considerable attention at the hands of the Government and other public bodies during the last few years. Measures are being taken to improve the indigenous breeds by systematic selection, and to make this improvement lasting, it is necessary that greater attention should be paid to proper feeding. To provide suitable grazing, forest areas of low economic value are, in some places, being thrown open for grazing. It does not therefore appear wise under these circumstances, to allow the existing Gomals to disappear. They should, on the other hand, be improved in every way and be made to serve the purpose for which they have been reserved all along.

The poor condition of the Gomals are generally due to a number of causes—development of acidity in the soil, lack of drainage and aeration or inadequate supply of plant foods in the soil. It is quite possible to have all these defects rectified. The question is who should do it? The Gomal is the common property of the village and no single individual or set of raiyats can or will undertake the work. Two courses suggest themselves as feasible solutions for the problem. The entire area of the gomal could be divided and leased out to raiyats owning cattle on the express condition that the leased out portions should be cultivated and put under fodder crops and improved in accordance with a plan to be drawn up by the Department of Agriculture; or the Village Panchayat concerned could be entrusted with the work in respect of the entire area and the produce divided among the cattle owners in some equitable manner to be decided upon by the Panchayats themselves. Both of these methods could be tried in select centres under the scheme of Rural Reconstruction that has been recently started by Government.

In this connection it may be of interest to note from some experiments conducted on the Cattle Breeding Station, Ajjampur, that an increase in yield in the case of manured and properly cultivated pasture to an extent of about 80 per cent over that under "No manure" was obtained. There is, besides, a decided improvement in the quality of grass as is seen from the Table given below, inasmuch as there is a marked increase in all the principal mineral ingredients—particularly Phosphoric acid and lime which are so essential for the development of the bone of the animals.

Composition of Grass from the Manured and the Unmanured Plots.

Treatment	Ash	Soluble ash	Crude proteins	Phospho-ric acid	Potash	Lime	Crude Fibre
1. Unmanured ...	7·954	2·593	3·044	0·34	1·564	0·442	38·41
2. Manured ...	9·247	3·703	3·919	0·41	1·666	0·640	37·59

Persons interested in conducting small scale trials on the use of manures on their own lands are requested to address the Agricultural Chemist for advice and help.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Thithies in Ghaliges and Vighaliges		Nakshatras in Ghaliges and Vighaliges	
								MAGH
	1	Tuesday ...	1	19	Padya	... 32 14	Dhanishta	... 58 3
	2	Wednesday	2	20	Bidige	... 33 48	Satabhisha	... 60
	3	Thursday...	3	21	Tadige	... 34 8	Satabhisha	... 0 2
	4	Friday ...	4	22	Chouti	... 33 8	Poorvabhadra	... 1 4
	5	Saturday...	5	23	Panchami	... 30 38	Uttarabhadhra	... 1 4
	6	Sunday ...	6	24	Shashti	... 27 45	Revathi Asvini	... 0 3 ... 58 2
	7	Monday ...	7	25	Sapthami	... 23 33	Bharani	... 56
	8	Tuesday ...	8	26	Ashtami	18 40	Krithika	... 52 2
	9	Wednesday	9	27	Navami	... 13 13	Rohini	... 48 2
	10	Thursday...	10	28	Dasami	... 7 26	Mrigasira	... 44 1
	11	Friday ...	11-12	29	Ekadasi Dwadasi	... 1 28 ... 54 4	Aridra	... 39 5
			Kumbha					
G	12	Saturday...	13	1	Trayodasi	... 49 51	Punarvasu	... 35 5
	13	Sunday ...	14	2	Chaturdasi	... 44 34	Pushya	... 32 2
	14	Monday ...	15	3	○ Pournima	... 40 0	Aslesha	... 29 2
								MAGH
	15	Tuesday ...	1	4	Padya	... 36 17	Makha	... 27
	16	Wednesday	2	5	Bidige	... 33 31	Pubba	... 24 5
	17	Thursday	3	6	Tadige	... 31 56	Uttara	... 25 4
	18	Friday ...	4	7	Chouti	... 31 36	Hastha	... 26 4
G	19	Saturday...	5	8	Panchami	... 32 24	Chitta	... 28 5
	20	Sunday ...	6	9	Shashti	... 36 37	Swathi	... 32 2
	21	Monday ...	7	10	Sapthami	... 38 3	Vishakha	... 37
	22	Tuesday ...	8	11	Ashtami	... 42 21	Anuradha	... 42 4
	23	Wednesday	9	12	Navami	... 47 14	Jeshta	... 49
	24	Thursday	10	13	Dasami	... 52 56	Moola	... 58 2
	25	Friday ...	11	14	Ekadasi	... 58 21	Poorvashada	... 60
	26	Saturday...	12	15	Dwadasi	... 60 0	Poorvashada	... 2
	27	Sunday ...	12	16	Dwadasi	... 2 59	Uttarashada	... 8
G	28	Monday ...	13	17	Trayodasi	... 6 49	Sravana	.. 13

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle-Shows, Agricultural Exhibitions and other useful notes
SHUDDA.		Sunrise 6-48 A.M.
Vyathipatha ...		
Variyan ...	Sravana rain 4th Pada. Birthday of Sujaya Kanthammanni.	
Parigha ...	Mowna Gowri Vratha	
Siva ...		
Siddha ...	Dhanishta rain 1st pada.	
Sadhya ...		
Subha ...	Kumara Shashti.	
Sukla ...	Rathasapthami. Rangaswamy Car Festival at Seringapatam. Rangaswamy Car festival at Hemagiri. Gopalaswamy Car festival at Agumbe.	
Brahma ...	Dhanishta rain 2nd pada. Bhishmashtami.	
Mahendra ...	Madhva Navami. Mallikarjunaswamy Car Festival at Mudukatore.	
Vaidhriti ..	Ekadasi for Smarthas. Bhishmaikadasi.	
Vishkamba ...	Ekadasi for Sri Vaishnavas.	
Preeti ...	* Bakrid. Dhanishta rain 3rd pada. Magadi Someswaraswamy Car festival. Gopalakrishnaswamy Car Festival at Tondanur. Adi-Madhvaswamy Car Festival at Bellore Kesvaswamy Car Festival at Bindiganavalai. Trineswaraswamy Car Festival at Mysore.	
Ayushman ...		
Sowbhagya ...		
Sobhana 1 ...	Vyasa Pourrima. Venkataramnasawamy Car Festival at Kotebetta. Narasimhaswamy Car festival Hurali. Car festival at Agara.	
BAHULA.		
Atiganda ...	Dhanishta rain 4th pada. Mallikarjunaswamy Car Festival at Bettadapura. Lakshminarasimhaswamy Car Festival at Akkihebbal and Kollegal.	1. Srinivasaswamy Car Festival at Kalahalli. Anjaneyaswamy Car Festival at Shimoga.
Sukarma 2 ...		2. Sibi Narasimhaswamy Car Festival.
Dhriti 3 ...	Kesawaswamy Car Festival at Shantigrama.	3. Srinivasaswamy Car Festival at Karighatta.
Shoola ...	Satabisha rain 1st pada.	
Ganda ...	P. Saturday.	1 Bettadapur, Hunsur Taluk.
Vriddhi ...	Uttanahalli Jatre. Marisaru.	2 Antharaghatta, Kadur Taluk.
		3 Vasanthapur, Bangalore Taluk.
Dhruva ...		4 Tavarekere, Sira Taluk.
Vyaghatha ...	Satabisha rain 2nd pada.	5 Talakoilbetta, Siddlaghatta
Harsha ...		6 Avani, Mulbagal Taluk.
Vajra ...		7 Sulekere, Chennagiri Taluk.
Siddhi ...	Satabisha rain 3rd pada. Ekadasi for Smarthas	8 Nandi, Chikballapur Taluk.
Vyathipatha ...	Ekadasi for Sri Vaishnavas.	9 Yedavara, Srinivaspur Taluk.
Variyan ...		1 Ghati, Dodballapur Taluk.
		2 Honnenahalli, Chikballapur Taluk.
Varigha ...	Sivarathri. Satabisha rain 4th pada.	3 Mudukutore, T. Narsipur Taluk.

FEBRUARY 1938.

MONTHLY NOTES.

THRESHING.

In making preparations for threshing, it is well to remember that this slow and tedious work can be done much more quickly and with less trouble and worry by adopting better methods than those commonly employed. Firstly, a stone threshing roller $2\frac{1}{2}'$ long by $2'$ high of the kind now coming into use in many parts of the State, is a very good appliance and is well within the means of the ordinary raiyat. It does the work quicker and with less labour, and can be used for threshing ragi, jola, avare, togari or hurali.

PADDY AND RAGI.

If the seedlings are ready in the nursery, paddy can be transplanted early this month. Irrigated ragi may also be transplanted similarly.

POTATO.

Potato crops should be sprayed with calcium arsenate solution to hill Epilachna beetle pest.

BEE-KEEPING.

Those interested in Bee-keeping, should arrange to get a couple of earthen pots or date palm stem decoy hives to keep them tied up in suitable places—in gardens or jungles or bungalow compounds—for attracting swarms that begin to move about now.

SUGARCANE.

During this month also sugarcane is planted. In the case of young planted sugarcane, three weeks old, earthing up and irrigation should be carried on twice at an interval of about two weeks, to control the borers This operation should be carried out in newly planted young canes until the planting season is over. Milling is also continued during this month.

Note that with the same amount of cane, a bigger money return can be obtained by the use of better mills which extract more juice and by better methods of boiling jaggory whereby a firm and light colour jaggory, fetching a higher price, can be got.

Use the Nahan or Madurai bullock mill, or if possible an engine driven mill for milling. Use red litmus paper to judge liming and good skimming ladle to remove scum thoroughly.

THE TOBACCO STEM BORER AND ITS CONTROL.

Tobacco has now become one of the most important money crops grown in the Mysore State. Hundreds of acres are planted out to tobacco in the different districts and one of the important insects that damage the plant is a small whitish caterpillar which bores into the stem of the plant. The young worms after hatching out from the eggs laid by the parent moth on the leaves of the plant, bore into the tissue of the leaf after wandering about sometime over the leaf. If eggs are laid close to a vein or mid rib of the leaf, the caterpillars are able to bore into these thick portions of the leaf directly. Finally they are able to bore into the main stem of the plant and remain feeding inside the tissue. During this process a gall-like swelling forms on the stem and the caterpillars are invariably found within this swelling. This gall-like swelling on the stem is characteristic of the attack of this insect on tobacco plants whether the latter are young seedlings or grown up plants. The full grown caterpillar pupates in a silken cocoon inside the gall-like swelling after making an exit hole. A very small yellowish brown moth (the parent insect) with narrow wings emerges out of the pupa in about 3 weeks. The moth is active only at night time and lays a large number of eggs anywhere indiscriminately on the plants and particularly on the lower surface of the leaves. The life cycle of the insect roughly takes about 7 weeks. Eggs-4 days, Caterpillars-36 days, Pupæ-10 days.

Nature and Extent of Damage.—The insects first begin their attack on the seedlings in the seed beds. From here they are transported to the fields in the seedlings during transplantation. In the early stages of attack on the plants in the seed beds, no external symptoms are noticed excepting the slight swelling on the tender stems, but soon after transplantation, the first symptom of attack is the wilting of one or two leaves of the young plant. The wilting of the top shoots is also noticed in a more advanced stage of the attack. New shoots start from the stem and thus in cases of severe attack the plants in a field are found very uneven and there is a consequent delay in harvesting and curing of the leaves. In severe cases over 50 per cent of the plants in a field are noticed to be infested and a great loss of good leaves takes place.

Control Measures.

1. As the plants in the seed beds get the attack first, very great care should be taken in weeding out all the seedlings showing a gall-like swelling on the tender stems before they are transplanted. All infested seedlings should either be burnt immediately or buried in the soil to a depth of not less than 2 feet. They should never be thrown lying about the seed beds.

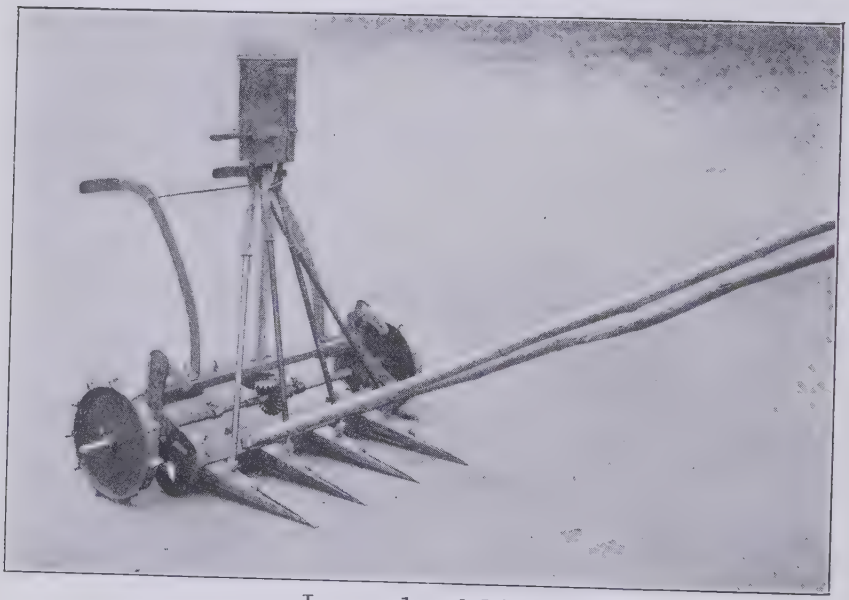
2. In case of very small nursery beds, a muslin-cloth may be used to cover at nights the plants in the beds when they are about two weeks old. As the moths are active and lay eggs only during night time, the cloth covering prevents egg laying on the plants.

3. Regular spraying of the plants in the seed beds with calcium arsenate at least once in 5 days during the period the plants are in the seed beds has been found to protect the seedlings to some extent.

4. As soon as the requisite number of seedlings has been used up for transplanting, the remaining seedlings left over should be completely removed and destroyed.

5. As soon as the first symptom of attack has been noticed in the fields sometime after transplantation, the swelling on the stem is very gently slit open vertically with a small knife without driving the knife point right to the opposite side of the swollen portion. A few slight sideways movements of the knife inside the swelling crushes the caterpillar inside. As the injury to the plant stem during the above process is very slight, the plant is not damaged and very good and healthy leaves are obtained. This method of control has been found to give the maximum results when the operation is done soon after the early symptoms of insect attack are noticed.

6. The practice of allowing the plants to remain in the fields after the final harvest of the leaves should be strictly avoided; otherwise the insects breed in very large numbers in the plants left in the fields and form centres from where the insects attack fresh fields.



Improved seed drill.

THE IMPROVED SEED DRILL.

The indigenous seed drill which is in common use for sowing seeds in the State is a simple and efficient implement. Its use ensures economy in seed rate brought about by seeds being sown in rows instead of being broadcasted. The seeds are sown at uniform depths so as to ensure uniformity in germination.

The implement consists of a seed cup into which seeds are dropped by hand by the operator of the implement or by another person employed for the purpose and bamboo tubes for discharging the seed into the soil. In working with this implement, it is found that seeds are not regularly distributed in the rows as certain spots will have three or more seeds lying close together and certain others are left blank.

The improved seed drill has been designed to overcome these defects. It is capable of discharging the seeds at regular intervals without the aid of human agency. The implement is made up of (1) a seed cup to hold the seeds, (2) a distributing mechanism which consists of a revolving and a stationary disc with corresponding holes affording passage for seeds being discharged, (3) discharge tubes which convey the seeds to the ground, (4) a motion shaft with a cog wheel at one end to revolve the upper disc and (5) the axle with ground wheels and transmitting cog. The seed drum carries besides an agitator to facilitate smooth entry of the seed through the disc holes and coulters fixed in front for forming seed tracks and preventing the seed tubes getting choked.

The drill as at present designed is intended for sowing ragi and jola. It is estimated that the rate of seed to be sown per unit area can be reduced to half of that sown by the local drill and that half to three-fourths of an acre can be sown per hour. The implement is made of durable iron parts and is priced at Rs. 20.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges			Nakshatras in Ghaliges and Vighaliges	
	1	Tuesday ...	14	18	Chaturdasi	... 9	31	Dhanishta	... 17
C	2	Wednesday	30	19	●Amavasya	... 11	1	Satabisha	... 19
								PHALGUN	
	3	Thursday	1	20	Padya	... 11	11	Poorvabhadra	... 21
	4	Friday ...	2	21	Bidige	... 10	5	Uttarabhadra	... 21
	5	Saturday	3	22	Tadige	.. 7	47	Revathi	... 20
	6	Sunday ...	4–5	23	Chouthi	... 4	26	Asvini	... 18
					Panchami	... 55	32		
	7	Monday ...	6	24	Shashti	... 55	12	Bharani	... 16
	8	Tuesday ...	7	25	Sapthami	... 50	1	Krithika	... 12
	9	Wednesday	8	26	Ashtami	... 43	41	Rohini	... 8
M	10	Thursday	9	27	Navami	... 39	54	Mrigasira	... 4
M	11	Friday ...	10	28	Dasami	... 32	0	Aridra	... 0
								Punarvasu	... 55
M	12	Saturday	11	29	Ekadasi	... 26	16	Pushya	... 52
	13	Sunday ...	12	30 Mee	Dwadasi	... 18	10	Aslesha	... 50
	14	Monday ...	13	1	Trayodasi	... 16	33	Makha	... 47
H	15	Tuesday	14	2	Chaturdasi	... 12	49	Pubba	... 45
	16	Wednesday	15	3	○Pournima	... 10	6	Uttara	... 45
								PHALGUI	
	17	Thursday	1	4	Padya	... 8	28	Hastha	... 48
	18	Friday ...	2	5	Bidige	... 8	7	Chitta	... 47
G	19	Saturday	3	6	Tadige	... 9	0	Swathi	... 51
	20	Sunday ...	4	7	Chouthi	... 11	10	Vishaka	... 55
	21	Monday ...	5	8	Panchami	... 14	31	Anuradha	... 60
	22	Tuesday ...	6	9	Shashti	... 18	46	Anuradha	... 1
	23	Wednesday	7	10	Sapthami	... 23	48	Jeshta	... 7
	24	Thursday	8	11	Ashtami	... 29	6	Moola	... 14
	25	Friday ...	9	12	Navami	... 34	20	Poorvashada	... 20
	26	Saturday	10	13	Dasami	... 39	0	Uttarashada	... 26
	27	Sunday ...	11	14	Ekadasi	... 41	56	Sravana	... 32
	28	Monday ...	12	15	Dwadasi	... 45	28	Dhanishta	... 36
	29	Tuesday	13	16	Trayodasi	... 46	48	Satabisha	... 39
	30	Wednesday	14	17	Chaturdasi	... 46	54	Poorvabhadra	 41
	31	Thursday	30	18	●Amavasya	... 45	37	Uttarabhadra	... 40

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
Siva ...	Amavasya Thithi.	Sunrise 6-39 A.M.
Siddha ...	Ash Wednesday.	
SHUDDA.		
Sadhya ...	Kalanathaswamy Car Festival at Araga. Beginning of Moharam.	
Shubha ...	Poorvabhadra rain 1st pada. Birthday of Ramakrishna Paramahamsa. Teppotsava at Srirangam.	
Sukla ...	Mari Sidi at Mysore.	
Brahma ...		
Mahendra ...	Poorvabhadra rain 2nd pada.	
Vaidhriti ...	Brahmotsava at Srirangam.	
Vishkamba ...		
Preethi ...	Poorvabhadra rain 3rd pada.	
Ayushman ...		
Sowbhagya ...	Vairamudi at Melkote.	
Shobhana ...	Last day of Moharam.	
Atiganda ...	Poorvabhadra rain 4th pada. Karalgaladae feast.	
Sukarma, Dhriti ...	Holi Feast. Prasanna Nanjundeswaraswamy Car Festival at Mysore. Gadhadaraswamy Car Festival, Govirayaswamy Car Festival. Lakshminarasimhaswamy Car Festival at Devarayanadurga, Cheluvarayaswamy Car Festival at Melkote.	
Shoola ...	Uttarabhadra rain 1st pada. Gunja Narasimhaswamy Car Festival at T.-Narasipur. Mukamba Utsava at Kollore.	Kesavaswamy Car Festival at Nagamangala. Chamundeswari Car Festival at Harohalli. Venkataramanaswamy Car Festival at Nonabur. Panchalingeswaraswamy Car Festival at Barkur.
BAHULA.		
Ganda, Vridhi ...		
Dhruva ...	Mahabisheka at Melkote.	
Vyaghatha ...	Kalale Lakshmikanthaswamy Car Festival. P. Saturday.	
Harsha ...	Uttarabhadra rain 2nd pada.	
Vajra ...	Ganganur Neelakanteswarswamy Car Festival.	
Siddhi ...	Mahabaleswaraswami Car Festival. Matitthaleswaraswamy Car Festival at Kandagul.	
Vyathipatha ...		
Variyan ...	Uttarabhadra rain 3rd pada. Mukamba Car Festival at Kollore.	
Parigha ...		
Siva ...		
Siddha ...	Uttarabhadra rain 4th pada. Sarwathra Ekadasi. Himavadgopalaswamy Car Festival.	
Sadhya ...		
Shuba ...		
Sukla ...	Revathi rain 1st pada.	
Bramha ...	Sarwathra Amavasya.	

MARCH 1938.

MONTHLY NOTES.

SUGARCANE.

During this month also cane can be milled and planted.

COTTON.

On dry land fields, the bulk of the local variety of cotton will be picked. It will pay to pick cotton clean and also to pick good cotton separately from worm-eaten, stained or otherwise dirty cotton.

GARDEN LANDS.

On garden lands, *i.e.*, under well cultivation, minor vegetable crops like beans, cucumber, maize, etc., can be now put in, which will be removed in time to prepare and get the land ready for the main rainy season crop of irrigated ragi, chillies, or potatoes.

BEE-KEEPING.

If a colony of bees has settled in the pot or decoy hive, it should be left undisturbed till such time as a few combs are built and eggs and young ones begin to appear.

RURAL DEVELOPMENT.

The increased interest that Governments and other public bodies all over India are evincing in the condition of our villages and the intensive work that has been started in different places to improve these conditions is a happy sign of the times, for, India is essentially a land of villages and there can be no prosperity for India as a whole as long as Indian villages are in their present neglected condition.

The needs of our villages are many and of a varied nature, and activities calculated to supply these needs should of necessity be of a varied nature as well. Supply of drinking water, improvement of rural sanitation and medical relief, provision of proper education, development of cottage industries and introduction of improved methods of farming are only a few of the pressing needs of our villages. While any small improvement in any one aspect of rural life will tell and will be noticeable, it is in the direction of improvement of the agricultural side that we must look for the greatest advance in the economic life of the rural people. It may therefore be of some interest to workers in the cause, and useful to the agricultural population of the villages to know what is being attempted by the Mysore Agricultural Department to help the agriculturists in their work, for the area to be covered is vast and the workers are but a handful and it may be very long, possibly some years, before the workers are able to come into direct contact with all the villages in the State.

The principal aim of the Agricultural Department is to make the farmer get more from his land than he is getting now. The following are some of the means that are being adopted to realise this :—

(i) Seeds possessing superior qualities are being freely distributed. Generally this work is restricted to the crops already being grown by the farmers. Often, however, seed of new crops which will give the farmer better returns, are also introduced. Our farmers do not easily take to new seeds or new methods. Therefore to convince them of the superiority of the seed distributed by the Department, seed is given free to trust-worthy farmers who will grow them under the supervision of the Departmental Officers. These plots will then serve as demonstration plots where others can come and see the performance of the new seed, when grown by one of themselves.

(ii) New kinds of implements within reach of the ordinary farmer are introduced and their work is demonstrated. These implements will help to prepare the soil better and thus to provide more plant food to plants, resulting in a better yield. Where individual farmers are not available for purchasing these implements, the Village Panchayets are induced to do so and these implements are then available to all the Villagers on payment of a small fee. Government also put out a few sets of implements free of all cost in such places where other facilities do not exist.

(iii) Demonstrations are carried on about economical methods of producing good coloured and pure jaggory.

(iv) Demonstration plots are arranged for showing the effects of various manures and arrangements are made for the supply of these manures. Improvements in the handling of cattle manure are also demonstrated, thus teaching the villagers to conserve all the fertility available in this manure.

(v) Breeding bulls, rams and cocks are all supplied at nominal rates, very often at half the cost and sometimes free of cost.

(vi) Help is given in the organization of Co-operative Seed Societies and Sale Societies for various commodities.

Thus help is given from all directions. It should be noted that the economic condition of villages and farmers are fully taken note of and supply of various things made sometimes free and sometimes at reduced prices to suit varying conditions. It is too early to assess the results of work done so far but signs are visible to show that the work is yielding good results. For further information and help on any of the items of work referred to above, approach the nearest Agricultural Officer or write direct to the Director of Agriculture in Mysore, Bangalore.

COTTON AS A NEW CROP IN THE IRWIN CANAL TRACT.

The advent of the Irwin Canal in the taluks of French-Rocks, Mandya, Maddur and Malavalli has brought in its train a complete change in the Agriculture of those taluks. The raiyats of this tract have now the opportunity to grow crops with the certainty of a fair remuneration for their labours. The area now known as "Irwin Canal tract" is an area of precarious rainfall and only dry farming was being followed prior to the advent of the canal; the chief crops that were being grown were millets such as jola, ragi, navane and same along with a few mixtures like avare and niger, gingelly, castor, and groundnut also being grown. All these were absolutely dependent on the rainfall.

With the introduction of the Irwin Canal, the area is assured of a continuous water supply and with the block system that is introduced, the farmer has to grow a dry crop once in three years, having grown in the other two years sugarcane and paddy. As the latter two crops bring him a good return, and with the assurance of an ample supply of water during the third year also, the question that naturally arises is what dry crop to grow in the third year. The cultivation of millets, etc., does not bring in any money into the raiyats' pocket and the Department of Agriculture has been trying on its farms a number of different crops which can be grown with profit.

Groundnut has already been introduced as a money crop and it has been found that cotton can be grown in the tract successfully. Two varieties of Cotton M.A. II and Co 2 have been found suitable to the tract. The sowing could be done between the months of June to September, the crop taking 6 to 8 months before it is ready for harvest. The average yield has been about 15 maunds per acre and with Co 2 cotton, a crop of 32 maunds per acre on an area of 3 acres has been reported during the last year.

As the area that can be put under cane is naturally restricted, cotton can be grown with advantage as an alternative crop.

The cost of cultivation of cotton is not very high as compared to sugarcane and the profit realised will be a fair return to the farmer depending on the interest he takes in his work during the years he cannot grow sugarcane or paddy.

During this year an area of 130 acres both on the Government Farm and private lands has been put under cotton and the crop is under observation.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges			Nakshatras in Ghaliges and Vighaliges	
								BAHUDANYA YEAR.	CHAITR
G	1	Friday ...	1	19	Padya	... 43	11	Revathi	... 40
	2	Saturday	2	20	Bidige	... 39	27	Asvini	... 90
	3	Sunday ...	3	21	Tadige	... 35	53	Bharani	... 36
	4	Monday ...	4	22	Chouthi	... 29	38	Krithika	... 32
	5	Tuesday ...	5	23	Panchami	... 23	53	Rohini	... 30
	6	Wednesday	6	24	Shashti	... 17	54	Mrigasira	... 26
	7	Thursday	7	25	Saptami	... 12	5	Aridra	... 22
H	8	Friday ...	8	26	Ashtami	... 6	10	Punarvasu	... 17
	9	Saturday	9–10	27	Navami	... 3	4	Pushya	... 13
					Dasami	... 55	33		
	10	Sunday ...	11	28	Ekadasi	... 50	11	Aslesha	... 10
	11	Monday ...	12	29	Dwadasi	... 47	43	Makha	... 7
	12	Tuesday ...	13	30	Trayodasi	... 45	13	Pubba	... 6
				Mesha					
H	13	Wednesday	14	1	Chaturdasi	... 43	50	Uttara	... 6
	14	Thursday	15	2	○ Pournima	... 43	55	Hastha	... 7
									CHAITR
G	15	Friday ...	1	3	Padya	... 44	56	Chitta	... 8
C	16	Saturday	2	4	Bidige	... 47	25	Swathi	... 12
C	17	Sunday ...	3	5	Tadige	... 50	12	Vishaka	... 17
C	18	Monday ...	4	6	Chouti	... 55	35	Anuradha	... 22
C	19	Tuesday ...	5	7	Panchami	... 60	0	Jeshta	... 28
	20	Wednesday	5	8	Panchami	... 0	24	Moola	... 35
	21	Thursday	6	9	Shashti	... 5	26	Poorvashada	... 41
	22	Friday ...	7	10	Sapthami	... 10	11	Uttarashada	... 47
G	23	Saturday	8	11	Ashtami	... 14	32	Sravana	... 52
	24	Sunday ...	9	12	Navami	... 17	54	Dhanishta	... 56
	25	Monday ...	10	13	Dasami	... 20	5	Satabisha	... 59
	26	Tuesday ...	11	14	Ekadasi	... 20	12	Poorvabhadra	... 60
M	27	Wednesday	12	15	Dwadasi	... 20	45	Poorvabhadra	... 1
	28	Thursday	13	16	Trayodasi	... 19	0	Uttarabhadra	... 2
								Revathi	... 0
	29	Friday ...	14	17	Chaturdasi	... 16	29	Asvini	... 59
	30	Saturday	30	18	● Amavasya	... 12	50	Bharani	... 57

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
		Sunrise 6-22 A.M.
UDDHA.		
Iahendra ...	Lunar New Year's Day.	
aidhriti ...		
ishkamba ...	Revathi rain 2nd pada.	
reethi ...		
{ Ayushman ...		
{ Sowbhagya ...		
hobhana ...	Revathi rain 3rd pada.	Huskur, Anekal Taluk.
tiganda ..		Kudali, Shimoga Taluk.
ukarma ...	Sri Rama Navami.	Muddenahalli, Chennagiri Taluk.
)hriti ...		Varanasi, Kolar Taluk.
oola ...	Revathi rain 4th pada.	Bairappanahalli, Nelmangala Taluk.
anda ...		
riddhi ...		
)hruva ...	Tamil New Year's Day.	Asvini rain 1st pada.
yaghatha ...		
BAHULA.		
Iarsha ...	Good Friday.	
ajra ...	Easter holidays from 16th to 19th inclusive. Asvini rain 2nd pada.	
iddhi ...		
yatipatha ...		
ariyan ...		
arigha ..	Asvini rain 3rd pada.	
iva ...		
iddha ...		
adhya ...	Asvini rain 4th pada. P. Sa.	
hubha ...		
ukla ...		
rahma ...		
{ Mahendra ...	Bharani rain 1st pada.	Akhiricharshumba.
{ Vaidhriti ...		
ishkamba ...		
reeti ...		
yushman ...	Bharani rain 2nd pada.	

APRIL 1938.

MONTHLY NOTES.

DRY LANDS.

On dry lands when carting manure, cart also the soil from the beds of tanks which are usually dry at this time of the year, for the silt will both improve and enrich the soil.

PADDY AND RAGI.

Ragi and paddy which have ripened early may now be harvested and the seed of green manures sown in the land thus released. The seeds may be sown just after the first showers or under irrigation.

BEE-KEEPING.

If the colony of bees in the decoy hive has had a fair start, it may be transferred into an improved hive kept in a suitable shady place.

COFFEE.

Coffee is subject to the ravages of three important fungus diseases, namely (i) rust or leaf disease which was responsible for wiping out the Coylon coffee industry (ii) black rot or Koleroga common in the higher elevations and (iii) die-back. For all these diseases, spraying with Bordeaux mixture has been found to be successful. The spraying should be done before the South-West monsoon and sometimes it is necessary also to attempt a post-monsoon spraying. The time to start spraying depends on the extent of estate to be sprayed, not earlier than April and not later than May. The department issues spraying materials and sprayers on short credit, free of interest.

ARECANUT.

Areca garden owners should arrange to build areca driers ; it will mean better quality of nuts than in drying over an open fire and greater convenience in working. Agricultural Inspectors will render all possible aid in constructing such driers.

DISEASES COMMUNICABLE FROM ANIMALS TO MAN.

Some important diseases which are intercommunicable between man and the different species of domestic animals are discussed in this note.

1. *Tuberculosis.*—This is an infectious disease, common to man and animals, caused by Bacillus Tuberculosis. As the milk from animals suffering from tuberculosis is highly infective, public health depends largely upon the early detection of the disease in the animals by a qualified Veterinarian. The meat of the animals containing the lesions of the disease being also dangerous, contributes to the spread of the disease. A strict meat inspection in the slaughterhouse is quite indispensable. Hence, if this disease is well controlled in animals, mortality among human beings can be very considerably lessened. Milk from animals suspected of this disease should never be allowed to be consumed by human beings. Uncertified meat should never be allowed to find a sale in the market.

2. *Anthrax.*—A serious disease highly communicable to men who deal particularly with animal products such as skin, hair, wool and hides and to those assisting and doing *post-mortem* examinations in laboratories. The causal organism of this disease is known as Bacillus Anthracis. This disease can be controlled by timely use of serum and vaccine. Complete burning of the carcasses immediately after death, a thorough disinfection of all contaminated or suspicious animal products and adequate disinfection of the premises are the other measures necessary for checking the spread of this disease.

3. *Glanders.*—A disease, always associated with equine species and communicable to men, particularly those that come in contact with horses such as stablemen and others. The disease spreads so insidiously that it is observed clinically only after it is completely established in the body. Fortunately, however, with the advance in modern Veterinary Science, the Veterinary Surgeon has, at his command a diagnostic agent known as *mallein*, by employing which this disease can be definitely detected even in very early stages. The reactors must be destroyed and their carcasses burnt. It is thus made possible to have disease-free studs and by getting rid of this disease among horses, the human race is freed from it. It must be remembered that even the utensils, sponges, brushes and stable gears are sources of infection.

4. *Rabies.*—This is a deadly disease affecting dogs and cats. As this disease is always communicable through the bite of rabid animals, control of rabies in animals would go a long way to save mankind from this deadly scourge. The symptoms that an affected dog usually exhibits are fairly intelligible to any ordinary person. The best way to prevent the spread of the disease is to stress upon all dog and cat owners the necessity for getting them protected annually against rabies by prophylactic vaccination. If rabies is thus eliminated from these animals, its occurrence in man is considerably limited, if not wholly prevented.

5. *Foot and Mouth Disease.*—This is a virus disease most common in cattle, sheep, goats and pigs which though not so fatal as the

foregoing diseases, yet affects mankind by producing gastro-intestinal catarrh and formation of ulcers in the mouth as a result of drinking the milk of cows suffering from it. The milk and butter from animals affected with this disease are not therefore fit for human consumption.

6. *Cow-pox Vaccinia.*—This affects milkers and the lesions are usually seen on their hands, forearm, chest and face. The milk from affected animals is charged with the virus of the disease and if consumed raw is known to give rise to mouth eruptions and gastro-enteritis.

7. *Mange.*—Mange encountered in horses and in domestic pets such as dogs and cats is highly and readily contagious. Stablemen and horse-keepers contract the disease while grooming affected horses or handling contaminated harness, etc. Similarly, by handling and fondling mangy dogs and cats, the disease is quickly spread to man. Ringworm is also contracted by milkers from affected cattle and by children from affected dogs and cats. There are, besides the above, a large number of parasitic conditions common to man and animals, uncooked or improperly cooked meat being the chief source of the spread of these infections.

It will thus be seen that so long as man and animals are interdependent, the greatest possible care should be devoted to the continued maintenance of animals as well as man in perfect health.

CONTROL OF DAMPING OFF OF SEEDLINGS IN TOBACCO NURSERIES.

The moist conditions under which tobacco seedlings are raised in the nurseries are very favourable at the same time for the development of a fungus which kills a large number of seedlings resulting in a patchy appearance of the seed-bed. Heavy soils retaining moisture are more favourable to the disease than light porous soils. Overcrowding of seedlings as a result of using a high seed rate is another favourable condition for the disease and its rapid spread.

Since the disease is caused by a soil inhabiting fungus, the only reliable method known at present to control the disease is by disinfecting the soil before sowing. Various methods of disinfection of the soil, such as drenching with dilute formalin or using live steam, have been found to be effective, but are not economical when followed on a large scale.

Roasting the soil surface of the prepared seed bed by spreading on it trash, *viz.*, dry leaves, lantana twigs, casuarina leaves, etc., and burning the heap, is a very effective and cheap way of disinfection. This has an additional advantage of reducing the weeds in the nursery.

A further precaution, if necessary, should also be taken after the seedlings have come up. Spraying the young seedlings at least once in fifteen days, with ½ per cent Bordeaux mixture (5 lbs. copper sulphate, 5 lbs. of lime in 100 gallons of water) is quite effective in controlling "damping off" The disease is at its worst only when the seedlings are tender and not after they are hardened.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Thithies in Ghaliges and Vighaliges	Nakshatras in Ghaliges and Vighaliges
						VAISHA
	1	Sunday ...	1	19	Padya ... 8 7	Krithika ... 53
	2	Monday ...	2–3	20	Bidige ... 2 48 Tadige ... 57 0	Rohini ... 50
	3	Tuesday ...	4	21	Chouthi ... 51 6	Mrigasira ... 46
	4	Wednesday	5	22	Panchami ... 45 12	Aridra ... 42
	5	Thursday	6	23	Shashti ... 38 58	Punarvasu ... 39
	6	Friday ...	7	24	Sapthami ... 33 27	Pushya ... 34
	7	Saturday	8	25	Ashtami ... 28 18	Aslesha ... 31
	8	Sunday ...	9	26	Navami ... 23 50	Makha ... 28
	9	Monday ...	10	27	Dasami ... 20 14	Pubba ... 27
	10	Tuesday...	11	28	Ekadasi ... 17 36	Uttara ... 26
	11	Wednesday	12	29	Dwadasi ... 16 15	Hastha ... 27
	12	Thursday	13	30	Trayodasi ... 16 3	Chitta ... 28
M	13	Friday ...	14	31	Chaturdasi ... 17 2	Swathi ... 31
				Vri-shaba		
	14	Saturday...	15	1	O Pournima ... 19 21	Vishaka ... 36
						VAISHA
	15	Sunday ...	1	2	Padya ... 22 51	Anuradha ... 41
	16	Monday ...	2	3	Bidige ... 27 13	Jeshta ... 47
	17	Tuesday ...	3	4	Tadige ... 39 59	Moola ... 53
	18	Wednesday	4	5	Chouthi ... 36 56	Poorvashada ... 60
	19	Thursday	5	6	Panchami ... 41 39	Poorvashada ... 0
	20	Friday ...	6	7	Shashti ... 45 37	Uttarashada ... 6
G	21	Saturday	7	8	Sapthami ... 49 13	Sravana ... 11
	22	Sunday ...	8	9	Ashtami ... 51 25	Dhanishta ... 15
	23	Monday ...	9	10	Navami ... 52 42	Satabhisha ... 19
	24	Tuesday ...	10	11	Dasami ... 52 4	Poorvabhadra ... 20
	25	Wednesday	11	12	Ekadasi ... 50 38	Uttarabadra ... 22
C	26	Thursday	12	13	Dwadasi ... 47 43	Revati ... 21
	27	Friday ...	13	14	Trayodasi ... 43 57	Asvini ... 20
	28	Saturday	14	15	Chaturdasi ... 39 21	Bharani ... 17
	29	Sunday ...	30	16	● Amavasya ... 33 59	Krithika ... 14
						JESH
	30	Monday ...	1	17	Padya ... 28 12	Rohini ... 11
	31	Tuesday ...	2	18	Bidige ... 22 20	Mrigasira ... 7

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
		Sunrise 6-4 A.M.
HUDDA.		
owbhagya ...		
hobhana ...	Basava Jayanthi.	
tiganda ...		
ukarma ...	Bharani rain 3rd pada,	
Dhriti ...	Shankara Jayanthi.	
Shoola.	Ramanujachar Tirunaksha-	
anda ...	tra.	
riddhi ...	Bharani rain 4th pada.	
hruva ...		
yaghata ...		
arsha ...	Krithika rain 1st pada.	
ajra ...		
iddhi ...		
yatipatha ...	Id Meelad.	
ariyan ...	Krithika rain 2nd pada, Vyasa Pournima.	
AHULA.		
arigha ...		
iva ...		
iddha ...	Krithika rain 3rd pada.	
adhya ...		
huba ...		
ukla ...		
Brahma ...	Krithika rain 4th pada,	
Mahendra ...	Penultimate Saturday.	
Vaidhriti ...		
Vishkamba ...	Rohini rain 1st pada.	
Preeti ...		
Ayushman ...	Ascension Day.	
Sowbhagya ...		
Shobana ...	Rohini rain 2nd pada.	
Atiganda.		
Sukarma ...		
SHUDDA.		
Dhriti ...		
Shoola ...	Rohini rain 3rd pada.	

MAY 1938.

Monthly Notes.

Dry Lands.

On fields ploughed after the previous harvest, sow in the Bharani rains th early mungar crops *viz.*, Gingelly, jola, greengram, blackgram or groundnu which can be followed in the months of September or October by a second crop such as horsegram, cow-pea, bengalgram or wheat. Sow all crops in rows an wide apart *i.e.*, one foot, so as to make interculture easy later on.

Wet Lands.

On wet lands sow a green manure crop, such as sunnhemp (30 seers to th acre) or sunnhemp and cow-pea; this will be ready for being ploughed in puddle sown paddy land in July.

Garden Lands.

On garden land under well irrigation, potatoes, onions and turmeric ca now be planted.

Kamblihulas.

Wherever there was an attack of 'Kamblihulas' in the previous year al the raiyats of the locality should go round their fields from now on to th middle of July to catch the golden striped moths. All the moths picked mus be put into a mixture of kerosene oil and water and killed.

Bee-keeping.

If the bee colony is rapidly growing bigger and the brood chamber gettin full, with bees in all stages, a super (with wax foundation fixed to frames i available) should be placed on top of the brood for storage of surplus honey.

Arecanut.

The areca gardens of the malnad suffer from the effects of Koleroga. Th affected nuts drop down. Some times the affected trees are also killed. Th best thing to do is to spray the bunches before the rains of the South-Wes monsoon with Bordeaux mixture. If the spraying is done timely and wel the disease does not appear, but if not done well a second spraying may b necessary about the month of August-September. The Department issue sprayers and spraying materials on short credit free of interest. Spraying i crop insurance.

Tobacco.

Tobacco is subject to damage by the damping off fungus. As a precautio against this the nursery beds must be sprinkled with half per cent Bordeau mixture. This treatment might also minimize infection by leaf spot disease If leaf spots appear the nursery should be sprayed with Bordeaux mixture After transplantation of the seedlings, when the plants have developed a fe leaves, the basal leaves should be picked off to prevent mildew and if it shoul appear spraying with Bordeaux mixture ensures control. Be on the look ou for dwarfed or crinkly or mottled plants, and pull them out immediately as the harbour a virus, a very serious trouble in tobacco. At the end of the season the roots should all be pulled out as their remains will help to carry over th virus to the next season.

Leghorn and its one month's produce
on the Hebbal Farm.

Feeding the poultry during the afternoons
on the Hebbal Farm.

Cockerels maintained on the Hebbal Farm for distribution
to Village Panchayets.

POULTRY IN MYSORE.

Poultry raising in Mysore is not a new thing. For many years the raiyats have been breeding the country hen or Game Fowl. These fowls lay from 20 to 75 eggs per year, and the raiyat sells them to the egg merchant at 3 to 4 annas per dozen, and they are, in turn, sold to the consumer at 5 to 8 annas per dozen. Mysore imports thousands of dozen eggs, from Ernakulum and other Travancore points, each week. There is no necessity for this, because our Mysore climate is an excellent one for the raising of poultry, and we should be able to produce plenty of eggs for our own needs and be able to export also.

A few pointers on the raising of poultry might not come amiss.

If we want large eggs that will bring a better price, we must get chickens that have been bred for laying large eggs. These will be English fowls, or cross breds; that is, country hens crossed with a Leghorn, Minorca or Red male. The first cross will lay larger eggs and more of them than the mothers. After that, one should continue to get purebred males to mate to the offspring.

We can get good males from the Government Farm at Hebbal.

An easy way to get started with purebreds is to get eggs from Hebbal and set them under hens or put them in a small incubator and hatch the chicks. The best time to hatch is from July to January, as the monsoon is active then, and everything is growing.

If one wants chickens that will lay well, they should be well fed, from the time they are hatched, on white ants, ragi, cholam, and rice bran. If there are any lice on the chicks, they can be killed by putting powdered sulphur in the fowl's feathers.

It is best not to let the chicks run wild until they are large enough to take care of themselves, as hawks and cats and crows are apt to catch them. If possible, do not let them get to dirty water and filth, as that is not good for them and may make them sick. Always be sure their crops are full of feed when they go to bed at night, and then they will grow well. Do not keep too many in one place. If sickness comes, separate the sick ones at once, and you may save the well ones.

When the males start to bother the young females, sell all but one or two of the best. When the eggs come, do not keep them too long before you sell them; sell every two or three days. If you can tell which hen lays the biggest eggs, keep her and hatch all of her eggs. Do not sell your best fowls. Keep them to raise chickens from, if you always want to raise good chickens.

Do not keep the chickens shut up in tight buildings, without plenty of air, as the fresh air is necessary for healthy chickens. Get a new male each year for your hens, and your young stock will be stronger and lay more eggs if the male is from good laying stock.

It is well for several poultry raisers to go in together and get the same breed of chickens, or the same breed of males if they are to cross with country fowls, and kill all of the village male chickens, so that they will not mix.

If you think your chickens are sick, get word to your neare Veterinary, and he may be able to help you.

Take pride in your poultry, give them good care, have the best y can afford, do not stint on feed if you want to make money.

Pick up shells in the tank beds, and pound them up fine, and fe to your fowls. The lime will make bones, and egg shells for yo laying hens.

A little sulphur in the feed, while moulting, will help ne feathers to come; also some groundnut cake in the food will do t same.

If there are any problems or questions that you want informati on, write to Hebbal Poultry Farm, Hebbal or to Leon B. Losey, Spic College Poultry Farm, Krishnarajapuram, Bangalore Heights P. We will try and help you if we can.

SELECTING GOOD SEED OF GRAIN CROPS FOR SOWING.

To the readers of the Calendar, a few hints on selecting good seed for sowing might be timely.

Select the best earheads of pure strains of Ragi and Paddy on the field before harvest, cut these when fully ripe, dry well, and store separately for seed.

The largest and weightiest seeds have been found to give strong plants with a fair chance of yielding a good crop. So, sieve out the largest seeds from your stock intended for sowing. Weightiest seeds can be separated from the less weighty ones by immersing them in a saturated solution of common salt. Those that sink may be washed well, dried and used for sowing.

All the seeds sown may not sprout and all those that sprout may not turn out to be the best plants. To avoid disappointment resulting from sowing seed of doubtful vitality, it is a sound practice to test it before sowing. To do this, take out representative samples of seed from the stock reserved for sowing, mix them up and count out at random three lots of a hundred seeds each. Place these seeds in folds of moist cloth placed in a warm place. Remove those that sprout at intervals of say 12 hours, keeping a record of seeds removed. In about 24 hours for Ragi and 48-60 hours for paddy, sound and vigorous seeds of ragi and paddy will have sprouted. Calculate the sprouted seeds at so much per hundred tested. In this way an idea of what percentage of seeds sown is likely to sprout is obtained. The rate of seed to be sown can be easily determined. Remember, however that under natural conditions even a smaller percentage than what the test indicated might sprout and grow up into a healthy vigorous plant. So, allow a margin of extra seed for this contingency. Ordinarily the rate sown in this country may be considered sufficient for all contingencies.

Sowing the best seed is one of the first steps in good farming.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges			Nakshatras in Ghaliges and Vighaliges	
	1	Wednesday	3	19	Tadige	... 16	7	Aridra Punarvasu	... 3 ... 59
	2	Thursday...	4	20	Chouthi	... 10	4	Pushya	... 55
	3	Friday ...	5-6	21	Panchami Shashti	... 3 ... 59	5 4	Aslesha	... 57
	4	Saturday ...	7	22	Saptami	... 54	27	Makha	... 48
	5	Sunday ...	8	23	Asthami	... 50	44	Pubba	... 47
	6	Monday ...	9	24	Navami	... 47	59	Uttara	... 46
	7	Tuesday ...	10	25	Dasami	... 46	19	Hasta	... 46
G	8	Wednesday	11	26	Ekadasi	... 46	0	Chitta	... 48
G	9	Thursday...	12	27	Dwadasi	... 47	0	Swathi	... 50
	10	Friday ...	13	28	Trayodasi	... 49	12	Vishaka	... 54
	11	Saturday ...	14	29	Chaturdasi	... 52	30	Anuradha	... 59
	12	Sunday ...	15	30	○Pournima	... 56	45	Jeshta	... 60
									JESH
	13	Monday ...	1	31	Padya	... 60	0	Jeshta	... 5
				Mithuna					
	14	Tuesday ...	1	1	Padya	... 1	25	Moola	... 11
	15	Wednesday	2	2	Bidige	... 6	22	Poorvashada	... 18
	16	Thursday	3	3	Tadige	... 11	2	Uttarashada	... 24
	17	Friday ...	4	4	Chouthi	... 15	16	Sravana	.. 30
G	18	Saturday ...	5	5	Panchami	... 18	34	Dhanishta	... 35
	19	Sunday ...	6	6	Shasthi	... 20	47	Satabisha	... 38
	20	Monday ...	7	7	Sapthami	... 21	49	Poorvabhadra	... 40
	21	Tuesday ...	8	8	Ashtami	... 21	31	Uttarabhadra	... 41
	22	Wednesday	9	9	Navami	... 19	58	Revati	... 40
	23	Thursday...	10	10	Dasami	... 17	14	Asvini	... 40
	24	Friday ...	11	11	Ekadasi	... 13	29	Bharani	... 38
	25	Saturday ...	12	12	Dwadasi	... 8	52	Krithika	... 25
	26	Sunday ...	13	13	Trayodasi Chaturdasi	... 3 57	34 52	Rohini	... 30
	27	Monday ...	30	14	●Amavasya	... 50	53	Mrigasira	... 27
									ASHA
	28	Tuesday ...	1	15	Padya	... 45	45	Aridra	... 23
	29	Wednesday	2	16	Bidige	... 39	49	Punarvasu	... 19
	30	Thursday	3	17	Tadige	... 33	50	Pushya	... 15

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
		Sunrise 5-51 A.M.
anda ...		
riddhi ...		
hruva ...		
yaghata ...	Rohini rain 4th pada.	
Harsha ...		
Vajra ...		
iddhi ...		
yatipatha ...	Mrigasira rain 1st pada.	
ariyan ...	His Highness the Maharaja's birthday.	
arigha ...	H. M. the King Emperor's birthday.	
iva ...		
iddha ...	Mrigasira rain 2nd pada.	
adhya ...		
AHULA.		
huba ...		
ukla ...	Mrigasira rain 3rd pada.	
Brahma ...		
Mahendra ...		
Vaidhriti ..		
Vishkamba ...	Mrigasira rain 4th pada Penultimate Saturday.	
Preeti ...		
Ayushman ...		
Sowbhagya ...	Aridra rain 1st pada.	
Shobana ...		
Atiganda ...		
Sukarma ...		
Dhriti ...	Aridra rain 2nd pada	
Shoola ...		
Ganda ...		
SHUDDA.		
Vriddhi ...	Aridra rain 3rd pada.	
Dhruva ...		
Vyagatha ...		
Harsha ...		

JUNE 1938.

MONTHLY NOTES.

DRY LANDS.

The south-west monsoon begins in this month, and it is really the seaso for preparing land for sowing. Nearly all the fields remain untouched baking and hardening through the hot months, and only the heavy showers this month can moisten them sufficiently well to plough. Fields, however, whic were given the first ploughing in the previous month should be crossploughe now, so as to kill the weeds which may have sprouted in the interval. I preparation of the soil for sowing the point to remember is the great saving i time and money which can be effected by the use of the improved implement such as the improved or the mould-board plough, the six shovel cultivator, th disc harrow and the doddakunte. All these implements can be seen in th Government Experimental Farms. They are stocked and sold by the Agricul tural Department, and can be had in the Central Implement Depot in Bangalor and in the Depots of the Agricultural Inspectors in the Ranges.

On fields got ready for sowing, main crops of jola, Dharwar-America cotton, groundnut and dry land paddy may be sown.

KAMBLIHULAS AND GRASSHOPPERS.

In all villages affected by the Kamblihula, raiyats should look for the moth that will emerge after heavy showers. These moths will have to be hand picked and killed if raiyats want to avoid attack on their fields by this pest.

After the mungar rains the paddy grasshoppers emerge on the bunds They cannot jump long distances then and are easily caught by sweeping larg bags of cotton cloth over the bunds. Enormous numbers can be caught in thi way. They are then crushed or thrown into water to which has been added little kerosene. All the raiyats in the village should co-operate. The bag should be 5 feet long and 2 feet by 4 feet at the mouth. The opening is sup ported at the sides by two sticks 3 feet each and two men sweep the bunds a a run. See Bulletin.

BEE-KEEPING.

If the super provided in May has been half to three-fourths full wit honey, a 2nd super may now be provided. If the place is exceptionally rich i honey-yielding plants, a good crop of honey may be stored and this should b extracted.

JOLA-SMUT.

The jola crop suffers from smut or *kadige roga*. This disease can b successfully controlled by steeping the seeds before sowing in a solution copper sulphate. Packets of copper sulphate each enough to treat seed fo about 10 acres are available for a small cost at all agricultural depots. Th packets contain directions for treatment.

STERILITY IN CATTLE.

By sterility is understood a series of pathological and functional disorders of the generative organs of the breeding stock among both sexes and is generally indicated by the incapacity of the female to bear the young and of the male to reproduce its species. It is no doubt that a certain amount of sterility exists in the native cattle and it is a common sight in many of the villages in the State of well bred pedigreed cows being yoked along with the bullocks to the plough or to the cart for agricultural purposes and when asked the reason for such use the general reply invariably is that the cow was found unfit for breeding or never attained puberty nor exhibited oestrum. It is no doubt true that in our country cattle are often slow in coming into oestrum and the interval between successive gestations are relatively long. There is little doubt that sterility exists in certain breeds of cattle particularly in the malnad districts but their relatively low economic value has prevented the problem from being recognised in its proper perspective. Exact statistics regarding the incidence of sterility amongst breeding stock in our State are not available and an estimate of the exact monetary effects of all kinds of irregularities of reproduction is therefore difficult to compare and must obviously be very heavy.

During the recent years there have been several enquiries for scientific advice upon sterility in both sexes—for the treatment of breeding bulls showing a disinclination to serve and heifers and cows failing to come into season. This augers well and is a hopeful sign that stock breeders and dairy men are realising the seriousness of the problem.

Sterility is due to several causes and cannot be diagnosed as easily as some of the common and known diseases of live stock. Sterility may be due to anatomical deformities of any constituent part of the generative system (ii) to pathological lesions such as tumours, cystic ovaries and inflammatory conditions, (iii) to specific infections such as dourine, granular vaginitis, bovine abortion and venerial granuloma as in the dogs.

Again, environment, diet, endocrine secretions, heridity and absence of vitamins B and E, producing a sort of degeneration of germ cells and seminal epithelium, act also as contributory causes.

Deficiency of important minerals in the soil and feed constituting a defective nutrition is the common cause. Especially a deficiency in calcium and phosphorus has been proved to be the cause of sterility, low fertility and retention of placenta after calving.

In the ram, seminal pathology plays an important part in producing sterility and the spermogenetic functions of testes is very sensitive to outside influences. A large percentage of clinically normal rams with normal libido are either low in fertility or entirely sterile. It is also observed that the fertility of the Ram or Bull may vary considerably from season to season or with a change of environment and feeding. Pre-natal and ante-natal maintenance of cows in our rural parts is also very unsatisfactory resulting often times in long periods of ovarian inactivity even after one or two calvings.

The general measures to be adopted to combat infertility and sterility should mainly consist of creating improved resistance to disease by dietetic and hygienic methods, local uterine and ovarian thereby play only a secondary part.

Since Zondete and Aschleim demonstrated the stimulating effects upon the generative organs of female mice by the use of the urine of pregnant cows a line of treatment has been opened up in the treatment of functional sterility and our experience in this direction has been very limited. It is therefore necessary that the stock owner and dairy man should be educated to adopt prophylactic measures including proper housing and the use of proper feeds correctly balanced in quality and quantity and hygienic maintenance of his live stock, as sterility in the State is due more to defective nutrition, than to pathological causes.

ADVANTAGES OF BURDIZO METHOD OF CASTRATION OVER THE VILLAGE METHOD.

By the Burdizo method the operation is over in one or two minutes after casting the animal and securing, while the country method requires at least half an hour to do.

In the Burdizo method the resulting swelling is much less and lasts only for a day or two while in the other the swelling is great and persists for a couple of weeks or more and the animal suffers from a lot of pain and sometimes the scrotum gets burst and gives much trouble to the owner to have the open injury healed.

The pain caused by the Burdizo method is negligible while by the other method both the onlooker and the owner of the animal subjected to the operation can see the immense cruelty of the operation.

In Burdizo method the animal requires no particular care and nourishment while in the other the owner has to coax the animal to get nourishment for otherwise it will run down in condition. The Veterinary Officer, when he does by the Burdizo instrument, is able to give the animal some soothing draught if he considers it necessary and if the owner is so very touchy against the little pain caused even by this method.

Animals of any age can be castrated by the Burdizo method at any season of the year unlike in the other village methods resorted to only in the winter months after the cessation of rains and before the commencement of summer.

There is no fear of fly-blown wounds and other infections of Tetanus, etc., by this method with the minimum of care unlike in country methods very frequently.

Every one of the Village Panchayet members is requested to advise and educate the cattle owners in this behalf and save much of the suffering caused to the poor dumb animals in the villages by their owners and the village castrator. In fact every Panchayet will be well advised if they pass a rule that punishable cognizance would be taken if castration is done by any other method than by Burdizo. At the same time every two or three closely located Panchayets can get one or two of their intelligent village castrators trained in Burdizo method and buy an instrument and make use of it in systematic castration of unwanted useless male stock under the supervision of the officers of the Veterinary Department before they are one or two years and keep only select breeding bulls, rams and goats in the villages, with proper modern methods of keeping records of covering of valuable stock and marking their progeny by tatooing as in Western countries with the view to maintenance of the pedigree of the stock in the villages.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges	Nakshatras in Ghaliges and Vighaliges
	1	Friday ..	4	18	Chouti .. 28 30	Aslesha .. 12
	2	Saturday..	5	19	Panchami .. 26 46	Makha . 9
	3	Sunday ..	6	20	Shashti .. 19 58	Pubba .. 7
	4	Monday ..	7	21	Sapthami .. 17 6	Uttara .. 5
	5	Tuesday ..	8	22	Ashtami .. 15 41	Hastha .. 6
	6	Wednesday	9	23	Navami .. 14 55	Chitta .. 7
	7	Thursday	10	24	Dasami .. 15 38	Swathi .. 9
	8	Friday ..	11	25	Ekadasi .. 17 50	Vishakha .. 13
	9	Saturday..	12	26	Dwadasi .. 21 30	Anuradha .. 18
	10	Sunday ..	13	27	Trayodasi .. 25 12	Jeshta .. 23
	11	Monday ..	14	28	Chaturdasi .. 29 50	Moola .. 30
	12	Tuesday ..	15	29	O Pournima .. 34 43	Poorvashada .. 36
						ASHAD
	13	Wednesday	1	30	Padya .. 39 28	Uttarashada .. 42
	14	Thursday	2	31	Bidige .. 43 42	Sravana .. 48
	15	Friday ..	3	32	Tadige .. 47 8	Dhanishta .. 53
			Kataka			
	16	Saturday..	4	1	Chouti .. 49 11	Satabisha .. 57
	17	Sunday ..	5	2	Panchami .. 50 37	Poorvabhadra .. 59
	18	Monday ..	6	3	Shashti .. 57 15	Uttarabhadra .. 60
	19	Tuesday ..	7	4	Sapthami .. 48 46	Uttarabhadra .. 1
	20	Wednesday	8	5	Ashtami .. 46 5	Revathi .. 1
	21	Thursday	9	6	Navami .. 42 27	Asvini .. 0
						Bharani .. 58
	22	Friday ..	10	7	Dasami .. 37 53	Krithika .. 55
G	23	Saturday..	11	8	Ekadasi .. 32 42	Rohini .. 51
	24	Sunday ..	12	9	Dwadasi .. 26 55	Mrigasira .. 48
	25	Monday ..	13	10	Trayodasi .. 20 47	Aridra .. 43
	26	Tuesday ..	14	11	Chaturdasi .. 14 51	Punarvasu .. 39
	27	Wednesday	30	12	● Amavasya .. 8 45	Pushya .. 35
						SRAVAN
	28	Thursday	1–2	13	Padya .. 2 58	Aslesha .. 32
					Bidige .. 57 27	
	29	Friday ..	3	14	Tadige .. 57 52	Makha .. 29
	30	Saturday..	4	15	Chouti .. 48 49	Pubba .. 26
	31	Sunday ...	5	16	Panchami .. 45 53	Uttara .. 25

Yogas	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
Vajra ..		Sunrise 6-1 A.M.
Siddhi ..	Aridra rain 4th pada.	
Vyathipatha ..		
Variyan ..		
Parigha ..	Punarvasu rain 1st pada.	
Siva ..		
Siddha ..		
Sadhya ..		
Subha ..	Punarvasu rain 2nd pada.	
Sukla ..		
Brahma ..		
Mahendra ..	Punarvasu rain 3rd pada. Vyasa Pournima.	
BAHULA.		
Vaidhriti ..		
Vishkamba ..		
Preeti ..		
Ayushman ..	Punarvasu rain 4th pada. Dakshinayana Punyakala. Tikacharyara Punyadina.	
Sowbhagya ..		
Shobhana ..		
Atiganda ..	Pushya rain 1st pada.	
Sukarma ..		
Dhriti ..		
Shoola ...		
Ganda ..		
Vriddhi ...	Pushya rain 2nd pada. Penultimate Saturday.	
Dhruva ..		
Vyaghata ..		
Harsha ..	Pushya rain 3rd pada.	
Vajra ..	Bheemana Amavasya.	
Siddhi ..		
SUDDHA.		
Vyathipatha ..		
Variyan ..		
Parigha ..	Pushya rain 4th pada.	
Siva ..	Garuda Panchami.	

JULY 1938.

MONTHLY NOTES.

DRY LANDS.

Nearly all the main crops of the year, *viz.*, ragi, jola, groundnut, sajje, save, haraka with their subordinate akkadi crops are sown in this month.

PADDY.

On wet lands, paddy is sown in puddle if water is available, or it should be sown in a dry (not irrigated or puddled) seed-bed. It pays to use artificial manures for paddy. Use a mixture of 75 lbs. Ammonium sulphate and 120 lbs. Superphosphate per acre

RAGI.

The new variety of ragi called H22 is a high yielder both in grain and straw. It is now grown on thousands of acres in the Mysore State and also in some parts of the Madras Presidency. Try its suitability to your tract. Other good grains can also be had on application to the Department.

CHILLIES AND TOBACCO.

During the first half of this month, chillies and tobacco intended to be raised as dry crops should be sown in nursery beds so as to have seedlings ready for transplanting about the end of the next month.

PEPPER.

In the Malnad this is the month for layering pepper for propagation; select the best hermaphrodite vines in the garden for the purpose.

INSECTS.

Those who are troubled with ground grubs should get coolies to look for the young ones which will be found not often below the surface. If these are picked off and destroyed, no trouble will arise later and canes will be safe.

The redheaded Kamblihula moths begin to emerge in the ploughed fields during the middle of the month, in parts of Kolar District. The raiyats and their children should regularly pick out the moths in the early hours of the morning and evening and destroy them by putting them in a pot containing kerosened water.

Jola grasshoppers hatch out during the end of this month. They must be bagged from the bunds and destroyed.

BEE-KEEPING.

Any capped honey may be extracted; it is wise to leave some un-extracted to serve as an emergency measure stock, during the monsoon months.

POTATOES.

Potatoes suffer commonly from a disease known locally as "madiga roga." It is also called early blight Spraying with calcium arsenate solution (1 lb. in 50 gallons of water) with lime caseinate as a spreader protects the plants. This is a preventive also against the Epilachna beetle. Spray when the crop is about a month old, and a second time after an interval of 3 to 4 weeks.

SOME NEW STRAINS OF PADDY.

(Evolved on the Paddy Breeding Station, Nagenahally.)

G.E.B. 24 or Coimbatore Sanna as it is popularly known is a variety of paddy introduced by the Department of Agriculture about 16 years ago which has spread into many parts of the State replacing some of the local types. This is no doubt due to its superiority in certain respects over the local varieties. It is a good yielder, particularly on fertile soils. It has a very thin husk and a full grain so that the percentage of rice to paddy is comparatively high about 52 per cent ordinarily and consequently fetches eight annas to one rupee more per candy than the varieties it has displaced.

The area under this variety at present is over 30,000 acres. It would have been very much more had it not been for what the raiyats consider to be its chief defects which make it not quite suited for certain conditions and tastes. The following are the alleged defects :—

(1) The yield of straw per acre is much less than in the case of local varieties so much so that raiyats growing this variety are not infrequently faced with fodder shortage.

(2) The straw is stiff and wiry and is said to cause griping and dysentry in animals fed on it, particularly when it is fresh.

(3) It is not suited for soils of less than average fertility. It gives good yields only on good and fertile soils and only when planted well within the season.

As no single variety of paddy is likely to suit the requirements of different conditions and tastes, the Paddy Breeding Station, Nagenahally, has almost from its inception, been engaged in evolving new varieties. The following is a brief description of some which have been found satisfactory both on our trial plots on the Breeding Station and also on the fields of raiyats who have tried them :—

S. 246 *and S.* 236.—These are strains from a variety known as Nagapur Sanna or Muthina Sanna. The grains are very fine, slender, proportionately long and slightly curved with a tendency to slight awning or being tipped as it is called. The rice is pure white, takes a good polish and fetches a better price than GEB 24. They mature in about 5 months from date of sowing and are therefore earlier than GEB 24 by about a week. The yields of grain and straw are also good.

S. 139.—This is a strain from Kaddi Bhattha. The grain is awnless, straw coloured and some-what coarse being nearly twice as big as that of GEB 24. Yields of grain and straw are decidedly higher. It is preferred by the raiyats for lands of average fertility. It takes 6 to 6½ months to mature.

S. 67.—A strain from Kembhuti giving uniformly good yields. The grain is brownish in colour, awnless, medium coarse and full, and some-what sweet to the taste. The straw is also said to be better relished by the cattle than that of many other varieties. Yields of straw and grain are good. The crop matures in about 6 months, *i.e.*, a week or two earlier than S. 139.

S. 476.—This is a strain from Pattasamanahally Sanna. It matures in about the same time as S. 139. The grain is brown coloured, medium, fairly full, rather plump with a tendency to awning. It is better suited for poor soils and newly formed fields than G.E.B. 24. It matures in about the same time as S. 139 and compares favourably with it in respect of yields.

Any one of the five strains described above may be tried by the raiyats in the channel tracts of the Mysore District and other Maidan parts of the State as well.

For supplies of seed and further information on the subject apply to your Agricultural Inspector or to the Assistant Botanist in charge of the Paddy Breeding Station, Nagenahally, Mysore District.

HOW TO TAKE AND SEND SAMPLES OF SOILS AND MANURES FOR ANALYSIS.

Soils.—Select five or six different places, not near each other, in a ld of about an acre or so in extent, scrape the surface clean of all getation and accumulation of decaying leaves, etc. At each place, dig hole about 18 inches square with a sharp spade or other suitable plement such as a *mamtee*, to a depth of 18 inches. The walls of this le should be smooth and perpendicular. Remove the soil to a depth 8 inches from the sides of the hole in a slice about 4 inches thick, or e sample may extend to the depth indicated by a change of colour in se such change is between 8 and 12 inches.

Collect, break up all lumps with a wooden mallet, and mix all the mples from the five or six holes, remove all large stones, sticks, etc. ones of the size of a pea and smaller and fine roots should not be moved. After the heap collected is well mixed, take about 10 lbs. of il and put it into a clean cloth or canvas bag and tie up the mouth curely. Put the bag in a clean wooden box and forward. Each bag ould be distinctly labelled, and a duplicate label put inside the bag.

The following information should also be supplied along with the mples :—

(*a*) The management and rotation of crops in previous years.
(*b*) The character of the customary manuring, whether only cattle manure is used, or oil-cakes and such other manures also in addition.
(*c*) The average amounts of each of the more important crops yielded by the field.
(*d*) The character of the sub-soil, whether sandy or clayey, to a depth of about 3 feet at least.
(*e*) Level of ground water, character of natural vegetation and physical character of the soil.
(*f*) Local opinion with regard to fertility, etc.

Manures.—Take a small and equal quantity from near the centre of ch bag or heap with a long handled scoop or ladle; mix well and send out 2 to 5 lbs.

In case of oil-cakes, information about the quantity locally available ould also be furnished.

In case it is found difficult to get such samples from accumulation cattle manure in a large pit heap, the sample can be easily collected hen the manure is carted out into the fields and put there in small aps. A small quantity from each heap can be easily collected. Mix ell all samples thus got and send about 20 lbs. in a suitable box.

All available information with regard to the source of manure, hether from milch cows or working bullocks, and the way in which the imals were fed, *eg.*, fed only on straw or getting oil-cakes and bran in ldition should also be furnished.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges			Nakshatras in Ghaliges and Vighaliges	
	1	Monday ...	6	17	Shashti	... 45	5	Hastha	... 25
	2	Tuesday ...	7	18	Sapthami	... 43	40	Chitta	... 26
	3	Wednesday	8	19	Ashtami	... 44	27	Swathi	... 28
	4	Thursday...	9	20	Navami	... 46	25	Vishaka	... 31
	5	Friday ...	10	21	Dasami	... 49	35	Anuradha	... 36
	6	Saturday ..	11	22	Ekadasi	... 53	41	Jeshta	... 40
	7	Sunday ...	12	23	Dwadasi	... 58	21	Moola	... 47
	8	Monday ...	13	24	Trayodasi	... 60	0	Poorvashada	... 58
	9	Tuesday ...	13	25	Trayodasi	3	12	Uttarashada	... 60
G	10	Wednesday	14	26	Chaturdasi	... 8	2	Uttarashada	... 0
G	11	Thursday	15	27	○ Pournima	12	47	Sravana	... 6
									SRAVA
	12	Friday ...	1	28	Padya	... 15	46	Dhanishta	... 11
	13	Saturday	2	29	Bidige	... 18	32	Satabhisha	... 15
	14	Sunday ...	3	30	Tadige	... 20	3	Poorvabhadra	... 18
	15	Monday ...	4	31	Chouthi	... 19	18	Uttarabhadra	... 20
				Simha					
	16	Tuesday ...	5	1	Panchami	... 17	55	Revathi	... 20
	17	Wednesday	6	2	Shashti	... 15	19	Asvini	... 19
	18	Thursday...	7	3	Sapthami	... 11	42	Bharani	... 17
	19	Friday ...	8	4	Ashtami	... 7	20	Kritika	... 15
G	20	Saturday...	9–10	5	Navami Dasami	... 2 ... 56	3 25	Rohini	... 10
	21	Sunday ...	11	6	Ekadasi	... 50	30	Mrigasira	... 8
	22	Monday ...	12	7	Dwadasi	... 44	25	Aridra Punarvasu	... 4 ... 53
	23	Tuesday ...	13	8	Trayodasi	... 39	23	Pushya	... 55
	24	Wednesday	14	9	Chaturdasi	... 30	12	Aslesha	... 52
	25	Thursday...	30	10	● Amavasya	... 27	6	Makha	... 49
	26	Friday ...	1	11	Padya	... 27	17	Pubba	... 46
									BHADRAPA
	27	Saturday ...	2	12	Bidige	... 20	25	Uttara	... 44
G	28	Sunday ...	3	13	Tadige	... 15	31	Hastha	... 44
	29	Monday ...	4	14	Chouthi	... 13	47	Chitta	... 44
	30	Tuesday ...	5	15	Panchami	... 13	16	Swathi	... 46
	31	Wednesday	6	16	Shasti	... 14	7	Vishaka	... 49

Yogas	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
ldha ...		
dhya ...	Aslesha rain 1st pada.	Sunrise 6–5 A.M.
bha ...		
kla ...		
ahma ...	Varamahalakshmi Vratha.	
ahendra ...	Aslesha rain 2nd pada.	
idhriti ...		
shkamba ...		
eeti ..	Aslesha rain 3rd pada.	
ushman ...	Upakarma.	
wbhagya ...	Yajurupakarma.	
AHULA.		
obhana ...	Gayatri.	
iganda ...	Aslesha rain 4th pada.	
karma ...		
riti ...		
oola ...	Makha rain 1st pada.	
anda ...		
riddhi ...		
Dhruva ...	Sri Krishna Jayanti.	
Vyagatha ...		
arsha ...	Makha rain 2nd pada P. Saturday.	
ajra ...		
iddhi ...		
yatipata ...	Makha rain 3rd pada.	
ariyan ...		
arigha ...		
iva ...		
UDDHA.		
iddha ...	Makha rain 4th pada.	
huba ...	Gowri and Ganesha Feast.	
ukla ...		
rahma ...		
Iahendra ...	Pubba rain 1st pada.	

AUGUST 1938.

Monthly Notes.

Interculture.

A busy month for inter-culturing the main crops. It is well to note tha for cultivating between the rows, the small kunte with an entire blade—a min ature dodda kunte—is an excellent implement, as it works the whole of th space between the rows. Labour can be economised by using two or three these with one team.

Cotton.

On black cotton soils, the main crop of local cotton (*Sannahatti*) with i mixture of *navane* should be sown about the middle of this month. The im proved strain called Selection 69 is the best to grow ; it is a superior cotton an gives a higher money return.

Chillies and Tobacco.

On fields kept repeatedly ploughed, harrowed and weeded during the pa three months, chillies should be transplanted ; so should tobacco, the tran planting of which may be continued from about the latter part of this month t the middle of the next.

Garden lands.

On garden lands under well irrigation, the main rainy season grain crop ragi may be transplanted.

Lime tree borer.

The lime tree borer will be found in this month in small twigs, dry becau they are girdled by them. These twigs have to be broken off with the aid of forked twig if the trees are to be prevented from danger by the borer. Th borers fall down to the ground from the broken ends and die. See bulletin o the subject to be had from the Department.

Potato.

Potato crop should be sprayed with solution of calcium arsenate for de troying the epilachna beetle.

Bee-keeping.

Regular weekly cleaning of the bee-hive should be done to prevent th wax-moth from breeding inside.

Jola grasshoppers.

The young ones of jola grasshoppers should be bagged during this mont also.

Grapevine mildew.

Grapevines are attacked by downy mildew during the North-east mo soon and very soon afterwards also by rust. As a preventive against the diseases the vines may be sprayed with Bordeaux mixture. Three sprayin may be necessary, the first to be done when the shoots are 6 to 8 inch long, the second just after blossoming and the third before the fru changes colour.

HOW TO SEND DISEASED SPECIMENS FOR EXAMINATION.

When crops appear to be attacked by some sort of disease and a careful search does not reveal any insect or insects attacking them, it is to be presumed that they are affected by parasites of vegetable nature. In all such cases, material should be forwarded to the Mycologist, Department of Agriculture, for identification of the organism causing the disease. The following instructions are given for sending such materials.

Entire plants, or if they are very big, parts of plants showing the early stage and the late stage, should be carefully selected and sent in a clean tin or cardboard box in as fresh a condition as possible. The specimens may, if necessary, be lightly rolled in paper, but no packing material like dried leaves or saw-dust should get mixed up with the specimens. Care should be taken to see that the packet is posted by the earliest available post, so that there would be only the least delay in transit. All parcels should be sent to the Mycologist, Department of Agriculture, Bangalore, together with a letter giving full particulars as to the nature of the outbreak and its present condition. Arrangements will then be made to give instructions regarding the best method of treatment, and in serious cases, an officer of the Department will be sent to help the cultivators concerned.

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	1	Thursday..	7	17	Sapthami .. 16 4	Anuradha .. 54
	2	Friday .	8	18	Ashtami .. 19 12	Jeshta .. 59 3
	3	Saturday ..	9	19	Navami .. 23 24	Moola .. 60
	4	Sunday ..	10	20	Dasami .. 28 36	Moola ... 5 2
	5	Monday ..	11	21	Ekadasi .. 33 1	Poorvashada .. 10 4
	6	Tuesday ..	12	22	Dwadasi .. 37 57	Uttarashadha .. 18
	7	Wednesday	13	23	Trayodasi 42 20	Sravana .. 24
H	8	Thursday..	14	24	Chaturdasi 45 58	Dhanishta .. 29 1
	9	Friday ..	15	25	○ Pournima .. 48 25	Satabisha ... 33 4
						BHADRAPAD
	10	Saturday ..	1	26	Padya .. 49 42	Poorvabhadra ... 36 4
	11	Sunday ..	2	27	Bidige .. 49 63	Uttarabhadra .. 38 4
	12	Monday ..	3	28	Tadige .. 48 21	Revati .. 39 3
	13	Tuesday ..	4	29	Chouti .. 45 50	Asvini .. 39 5
	14	Wednesday	5	30	Panchami .. 42 22	Bharani .. 37 1
	15	Thursday..	6	31	Shashti .. 38 1	Kritika .. 34 3
				KANYA		
	16	Friday ..	7	1	Sapthami .. 32 55	Rohini .. 31 3
	17	Saturday ..	8	2	Ashtami .. 27 12	Mrigasira .. 27 1
	18	Sunday ..	9	3	Navami .. 21 33	Aridra .. 23 1
	19	Monday ..	10	4	Dasami .. 15 24	Punarvasu .. 19 4
	20	Tuesday ..	11	5	Ekadasi ... 9 18	Pushya .. 15 4
	21	Wednesday	12--13	6	Dwadasi .. 3 32 Trayodasi .. 58 15	Aslesha ... 11 1
	22	Thursday..	14	7	Chaturdasi .. 53 31	Makha .. 8 3
G	23	Friday ..	30	8	● Amavasya .. 49 42	Pubba .. 6
						ASVIJ
G	24	Saturday ..	1	9	Padya .. 46 53	Uttara .. 4
	25	Sunday ..	2	10	Bidige .. 45 52	Hasta .. 3 1
	26	Monday ..	3	11	Tadige .. 44 50	Chitta .. 3 3
	27	Tuesday ..	4	12	Chouti .. 45 41	Swathi .. 4 4
	28	Wednesday	5	13	Panchami .. 46 41	Vishakha .. 7 5
	29	Thursday..	6	14	Shashti .. 51 23	Anuradha .. 12
	30	Friday ...	7	15	Sapthami .. 55 14	Jeshta ... 17

Yogas	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
aidriti ..		Sunrise 6–12 A.M.
ishkambha ..		
reeti ..	Pubba rain 2nd pada.	
yushman ..		
owbhagya ..		
hobhana ..	Pubba rain 3rd pada.	
tiganda ..		
ukarma ..	Anantapadmanabha Chaturdasi.	
hriti ..		
AHULA		
hoola ...	Pubba rain 3rd pada.	
anda ...		
riddhi ..		
hruva ...	Uttara rain 1st pada.	
yaghatha ..	Mahabharani.	
arsha ..		
ajra ...	Uttara rain 2nd pada.	
iddhi ...	P. Sa. Madhyashtami.	
yathipatha, Variyan.		
arigha ...		
iva ...	Uttara rain 3rd pada.	
iddha ..		
adhya ..		
huba ..	Mahalya Amavasya. Uttara rain 4th pada.	
HUDDA.		
ukla ..	Commencement of Dasara.	
rahma ..		
ahendra ..		
aidhriti ..	Hastha rain 1st pada.	
ishkamba ..		
reeti ..		
yushman ...	Hastha rain 2nd pada. Saraswathi Avahana.	

SEPTEMBER 1938.

MONTHLY NOTES.

DRY LANDS.

The early *mungar* crops sown in the *bharani* rains will be ready for harvest towards the latter part of the month; after harvest, plough these lands and prepare them for a second crop of horse-gram, cow-pea or avare as suggested under May. In black cotton soils or dry tank beds and bunded fields wheat or bengalgram may be sown.

FODDER AND CATTLE.

It should be noted that from this month onwards till the close of the year green fodder is in full flush. The manure, principally the urine from the animals, is very valuable during this period, much more so than during the hot months or early rains when all animals, excepting those in milk or working bullocks are practically on starvation rations. Special care should be taken to see that all the urine from the stalls finds its way into the manure pit.

WET LANDS.

Towards the end of this month, on well-drained wet lands and garden lands Cambodia cotton may be sown; but this does not yield as much crop as that sown in May or June.

PADDY PESTS.

Paddy is liable to be attacked by stem borer from this month up to November. The shoot is killed by a caterpillar, which bores into it. The plants attacked will have the shoots withered. The caterpillars turn into moths. The moths lay eggs in masses, covered by golden hairs, on the leaves. These are easily seen and should be handpicked and destroyed. Light traps (hurricane lanterns placed in a basin with a little water and kerosene) kept in the field at a height of 4 ft. from the ground will attract and kill the moths. If these measures are not adopted, 10 to 20 per cent of the crop may be destroyed. Pest common in the Mysore District. Weeds also must be removed.

BEE-KEEPING.

Any capped honey available, over and above the needs of the colony during this comparatively inactive season, may be extracted. Regular cleaning should be continued.

THE LENDING LIBRARY.

Arrangements have been made recently to set apart a selection of books from the departmental library for the purpose of lending to persons interested in agriculture and allied subjects. A revised catalogue of these books giving information as to the conditions under which they may be borrowed can be obtained free of charge from the Officer in charge, Library, Department of Agriculture, Bangalore.

HOW TO SEND INSECTS AFFECTING CROPS FOR EXAMINATION.

Live specimens of insects along with the leaves, flowers, pods or twigs and branches which they are noticed to attack, should be collected and securely packed in a suitable receptacle whose lid is sufficiently well perforated for the passage of air and sent to the Entomologist, Department of Agriculture, Bangalore. Short notes regarding the time and mode of occurrence and damage and other information of interest should also be sent.

RAHUKALA AND GULIKAKALA.

Days of week	Rahukala	Gulikakala
Sunday	4-30 to 6 P.M.	3 to 4-30 P.M.
Monday	7-30 to 9 A.M.	1-30 to 3 P.M.
Tuesday	3 to 4-30 P.M.	12 NOON to 1-30 P.M.
Wednesday ...	12 NOON to 1-30 P.M.	10-30 A.M. to 12 NOON.
Thursday	1-30 to 3 P.M.	9 to 10-30 A.M.
Friday	10-30 A.M. to 12 NOON	7-30 to 9 A.M.
Saturday	9 to 10-30 A.M.	6 to 7-30 A.M.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges	Nakshatras in Ghaliges and Vighaliges
G	1	Saturday..	8	16	Ashtami .. 60 0	Moola .. 22
G	2	Sunday ..	8	17	Ashtami .. 0 10	Poorvashada .. 29
G	3	Monday ..	9	18	Navami .. 5 2	Uttarashada .. 35
G	4	Tuesday ..	10	19	Dasami .. 10 2	Sravana 41
	5	Wednesday	11	20	Ekadasi .. 14 19	Dhanishta .. 46
	6	Thursday	12	21	Dwadasi .. 18 8	Satabhisha .. 51
	7	Friday ..	13	22	Trayodasi .. 20 38	Poorvabhadra .. 55
	8	Saturday..	14	23	Chaturdasi .. 22 6	Uttarabhadra .. 57
	9	Sunday ..	15	24	O Pournima .. 22 17	Revathi .. 58
						ASVI
	10	Monday ..	1	25	Padya .. 20 57	Asvini .. 58
	11	Tuesday ..	2	26	Bidige .. 18 34	Bharani .. 55
	12	Wednesday	3	27	Tadige .. 15 53	Krithika .. 54
	13	Thursday	4	28	Chouthi .. 10 48	Rohini .. 51
	14	Friday ..	5	29	Panchami .. 5 48	Mrigasira .. 47
	15	Saturday..	6-7	30	{ Shashti .. 0 15 { Sapthami .. 54 29	Aridra .. 49
	16	Sunday ..	8	31	Ashtami ... 48 27	Punarvasu .. 39
					TULA	
	17	Monday ..	9	1	Navami .. 42 30	Pushya .. 38
	18	Tuesday..	10	2	Dasami .. 36 49	Aslesha .. 30
	19	Wednesday	11	3	Ekadasi .. 31 34	Makha .. 28
	20	Thursday	12	4	Dwadasi .. 26 59	Pubba .. 24
	21	Friday ..	13	5	Trayodasi .. 28 15	Uttara .. 23
G	22	Saturday..	14	6	Chaturdasi .. 20 33	Hastha .. 21
	23	Sunday ..	30	7	● Amavasya .. 18 57	Chitta .. 22
						KARITHI
G	24	Monday ..	1	8	Padya .. 18 53	Swathi .. 23
	25	Tuesday ..	2	9	Bidige .. 18 33	Vishakha .. 26
	26	Wednesday	3	10	Tadige .. 21 49	Anuradha .. 29
	27	Thursday	4	11	Chouthi .. 25 10	Jeshta .. 34
	28	Friday ..	5	12	Panchami .. 29 32	Moola .. 40
	29	Saturday..	6	13	Shashti .. 31 25	Poorvashada .. 46
	30	Sunday ..	7	14	Sapthami .. 37 32	Uttarashada .. 52
	31	Monday ..	8	15	Ashtami .. 44 37	Sravana .. 59

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
wbhagya ..	Durgashtami.	Sunrise 6–12 A.M.
obhana ..		
iganda ..	Ayudha Pooja. Hastha rain 3rd pada.	
ukarma ..	Vijaya Dasami.	
riti ..		
oola ..		
anda ..	Hastha rain 4th pada.	
iddhi ..		
hruva ..	Shab-e-bharat	
AHULA.		
yagatha-Harsha ..	Chitta rain 1st pada.	
ajra ..		
ddhi ..		
yathipatha ..		
ariyan ..	Chitta rain 2nd pada.	
arigha ..		
iva ..		
iddha ..	Chitta rain 3rd pada.	
adhya—Shuba ..		
ukla ..		
rahma ..	Chitta rain 4th pada.	
ahendra ..		
aidrithi ..	Deepavali. P. Saturday.	
ishkambha ..		
HUDDA.		
reeti ..	Balipadyami. Swathi rain 1st pada.	
yushman ..		
owbhagya ..		
hobana ..	Swathi rain 2nd pada.	
tiganda ..		
ukarma ..		
hriti ..	Swathi rain 3rd pada.	
hoola ..		

OCTOBER 1938.

MONTHLY NOTES.

HINGAR CROPS.

The month for the sowing of the *hingar* crops, such as *hingar* jola, the various grams, coriander, wheat, cheap grains like *baragu* or *same*, *etc.*, on dry lands in Chiltaldrug, Shimoga, and generally the northern part of the State.

WET AND GARDEN LANDS.

On wet and garden lands, potatoes, Cambodia cotton and the various garden crops can be sown.

SUGARCANE.

In some parts of the State, this is also one of the seasons for the planting of sugarcane; this is done under tanks which are known to get very good supplies almost unfailingly during the heavy *hasta*, *chitta* rains of this month, which will carry the crop through the hot months, when the cane will be in full growth and would require heavy irrigation. This planting has the advantage of enabling the raiyat to mill cane long before the general milling season begins, and to put jaggery on the market when prices rule high—(*vide* notes under January *re* seed setts for planting).

AVARE (DOLICHOS LABLAB) POD BORER.

Look for *avare* pod borer of which a few caterpillars will be found on the fresh few flower spikes that will appear this month. If they are gathered and killed, the subsequent generations will be prevented. If this work is not done now, you will have to wait till eggs are found in large numbers on young pods and flowers. These will have to be rubbed off. Caterpillars are killed to save the crop from severe damage. Another operation may be necessary after 10 or 15 days when fresh eggs may be found. Cost 12 annas per acre. See circular on *avare* pod borer, copy of which can be had free.

COFFEE-BORER.

The stems of coffee plants in estates where the coffee-stem borer is bad should be swabbed with 10 per cent tar distillate emulsion, during this month. Attention to scrubbing of the stems of coffee should also be paid to reduce the borer trouble.

BEE-KEEPING.

Regular cleaning of the bee hive should be continued.

CO-OPERATIVE EXPERIMENTS IN AGRICULTURE.

A feature of the work of the Mysore Agricultural Department for many years has been the organization and carrying out of co-operative testing of improvements recommended by the Department on the lands of cultivators. There are two reasons why these tests should be made on the cultivator's own land. Firstly, the cultivator conducts the tests himself and therefore the most convincing proof of whether a suggested improvement is an improvement or not is provided; and secondly, the tests are conducted on the soil and under other conditions existing in the place where the improvements are later on to be adopted on a large scale. The cultivator finds out for himself with the aid of these simple tests what improvements are practicable on his land.

THE MYSORE AGRICULTURAL AND EXPERIMENTAL UNION.

These co-operative experiments are being conducted since 1918 mainly by the members of the Mysore Agricultural and Experimental Union. Members of this Union, in co-operation with the Department of Agriculture, conduct regular tests of implements, seeds, manures and remedial measures for insects pest and plant diseases. The results of these tests are discussed at the annual meeting of the Union and published in the Journals of the Union printed in English and Kannada. The Journals contain besides much useful information on all matters relating to agricultural improvement. The Vernacular Journal is being published as a monthly; the English edition is a quarterly publication. The Kannada edition of the Journal has recently been specially recommended by Government to the Village Panchayets. It includes much information of special value to them.

Agriculturists of the State who wish to join the Union or who wish to have any information connected with it are requested to write to the Secretary, the Mysore Agricultural and Experimental Union, Seshadri Road, Bangalore.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Tithies in Ghaliges and Vighaliges		Nakshatras in Ghaliges and Vighaliges	
	1	Tuesday ...	9	16	Navami	... 48 11	Dhanishta	... 60
	2	Wednesday	10	17	Dasami	... 57 49	Dhanishta	... 4 4
	3	Thursday...	11	18	Ekadasi	... 55 25	Satabhisha	... 9 3
	4	Friday ...	12	19	Dwadasi	... 56 53	Poorvabhadra	... 13 2
	5	Saturday ...	13	20	Trayodasi	... 56 57	Uttarabhadra	... 15 4
	6	Sunday ...	14	21	Chaturdasi	... 55 45	Revati	... 17
	7	Monday ...	15	22	○ Pournima	... 53 19	Asvini	... 17
								KARTIKA
	8	Tuesday ...	1	23	Padya	... 49 56	Bharani	... 15 5
	9	Wednesday	2	24	Bidige	... 45 38	Krithika	... 13 4
	10	Thursday...	3	25	Tadige	... 40 37	Rohini	... 10 5
	11	Friday ...	4	26	Chouti	... 35 9	Mrigasira	... 7 2
	12	Saturday ...	5	27	Panchami	... 29 27	Aridra Punarvasu	... 3 2 ... 29 2
	13	Sunday ...	6	28	Shashti	... 23 33	Pushya	... 55 1
	14	Monday ...	7	29	Sapthami	... 17 41	Aslesha	... 51 1
	15	Tuesday ...	8	30	Ashtami	... 17 7	Makha	... 47 4
					Vrishchika			
	16	Wednesday	9	1	Navami	... 7 4	Pubba	... 44 4
	17	Thursday...	10-11	2	Dasami Ekadasi	... 2 39 ... 58 54	Uttara	... 42 2
	18	Friday ...	12	3	Dwadasi	... 56 29	Hastha	... 41 1
G	19	Saturday ...	13	4	Trayodasi	... 54 52	Chitta	... 40 5
	20	Sunday ...	14	5	Chaturdasi	... 54 44	Swathi	... 41 5
	21	Monday ...	30	6	● Amavasya	... 51 57	Vishakha	... 14 1
								MARGASIR
	22	Tuesday ...	1	7	Padya	... 55 25	Anuradha	... 47 4
	23	Wednesday	2	8	Bidige	... 60 0	Jeshta	... 57 1
M	24	Thursday...	2	9	Bidige	... 1 46	Moola	... 57 5
	25	Friday ...	3	10	Tadige	... 6 17	Poorvashada	... 60
	26	Saturday ...	4	11	Chouti	... 11 16	Poorvashada	... 4
	27	Sunday ...	5	12	Panchami	... 16 25	Uttarashada	... 10 2
	28	Monday ...	6	13	Shashti	... 21 30	Sravana	... 16 4
	29	Tuesday ...	7	14	Sapthami	... 26 6	Dhanishta	... 22 3
	30	Wednesday	8	15	Ashtami	... 23 45	Satabisha	... 27 2

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
		Sunrise 6-12 A. M.
anda ...		
riddhi ...		
hruva ...	Swathi rain 4th pada.	
yagatha ...		
Harsha ...		
ajra ...	Vishaka rain 1st pada.	
iddhi ...	Vyasa Pournima.	
		Lunar Eclipse.
AHULA.		
yathipatha ...		
ariyan Parigha ...	Vishaka rain 2nd pada.	
iva ...		
iddha ...		
adhya ...	Vishaka rain 3rd pada.	
huba ...		
ukla ...		
rahma ...		
Mahendra ...	Vishaka rain 4th pada.	
Vaidhriti ...		
ishkamba ...		
reeti ...		
yushman ...	Anuradha rain 1st pada. P. Sa.	
owbhagya ...		
hobana ...		
UDDHA.		
tiganda ...		
ukarma ...	Anuradha rain 2nd pada.	
hrithi ...	Ramzan.	
hoola ...		
anda ...	Anuradha rain 3rd pada.	
riddhi ...		
hruva ...		
yagatha ...		
arsha ...	Anuradha rain 4th pada.	

NOVEMBER 1938.

NONTHLY NOTES,

RAGI.

A few days before harvesting ragi, go over the field and select and harvest separately all ear-heads which are large in size and have good number of spikes. Dry and thresh them separately and preserve carefully for seed. This seed will give you plants with large ear-heads with many spikes and therefore, a much bigger yield than unselected seed.

SUGARCANE.

On wet lands reserved and being prepared for sugarcane, green manure crops can be sown. Applications for seed setts should be made early.

COTTON.

Dharwar-American cotton *(Doddahatti)* sown in May-June will be ready for a first picking; and in picking, care should be exercised, as mentioned in the notes under March. The best plants, *i.e.*, those bearing profusely should be marked down too, and their cotton should be picked and stored separately. This should later be ginned at home and the seed preserved for sowing next season.

FODDER.

Jola raised for fodder and green grass in the jungles will be in condition for making ensilage, and every cattle owner should arrange for this method of storage.

AVARE POD BORER.

Rubbing of eggs and caterpillars of the avare pod borer may have to be done this month also. See notes for previous month.

COFFEE.

As soon as the rains cease, spraying against green bug on coffee should be commenced on all infected estates and continued until the picking season. They will be observed only on a few trees to begin with, and if these are sprayed, the severity of infestation will be considerably reduced. The infestation will start with an ant's nest in the ground or on the tree as a centre. Spraying should be continued after the rains until the monsoon sets in.

BEE-KEEPING.

Good care of the bee colony should be taken; wax-moth should not be allowed to breed in the hive: the entrance into the hive should be reduced much in the case of a weak colony to prevent the wax-moth trouble as there is some possibility of the colony dwindling in numbers during this month and the next. Sugar syrup or dilute honey or combs with cappedhoney should be supplied if found necessary; every effort is to be made to keep the colony fairly strong.

INFORMATION FOR VISITORS TO THE DEPARTMENTAL FARMS.

Name of Farm	Location and postal address	Main lines of work in progress	Most suitable time to visit	Controlling officer from whom further information may be obtained
1. Hebbal Farm	Hebbal, 5 miles from Bangalore on the Bangalore-Chikballapur Road. P. O. Hebbal, Bangalore.	Experimental work on the cultivation and breeding of Hain ragi, groundnuts, sugar-cane, paddy and potato, besides several minor crops. The Hebbal Dairy, the Agricultural Engineering Workshop and the Agricultural School are also located on the Farm. The Serum Institute is situated close by.	October and November for the dry land crops and November to January for the wet land crops.	The Deputy Director of Agriculture, Bangalore.
2. The Babbur Farm.	Babbur village, about 3 miles from Hiriyur, which is a Taluk headquarter station in the Chitaldrug District, 100 miles on the main Bangalore-Bellary Road. P. O. Hiriyur.	Experimental work on cotton and jola, sugar-cane and cocoanuts.	January and February.	The Director of Agriculture, Bangalore.
3. The Marthur Farm.	About 9 miles from Sagar-Jog Road, Shimoga District. P. O. Talaguppa, *via* Sagar.	Koleroga control and other experimental work on arecanut. Work also on the cultivation of paddy, sugar-cane, pepper cardamom and ginger.	From November to February.	The Senior Assistant Director of Agriculture, Shimoga.
4. The Nagenahalli Paddy Breeding Station.	At Nagenahalli, about 5 miles from Mysore on the Mysore-Bangalore Road. P. O. Mysore.	Paddy breeding.	October and November.	The Deputy Director of Agriculture, Bangalore.
5. The Hunsur Kar Ragi Station.	Hunsur Town on the Mysore-Mercara Road. P. O. Hunsur.	Experimental work on Kar ragi varieties and crops suited to the Kar ragi tract.	August.	Do
6. The Balehonnur Coffee Experimental Station.	About 5 miles from Balehonnur, Kadur, District. P. O. Balehonnur.	Manurial, cultivation and breeding work on coffee, as well as the study of coffee diseases and control methods. Other plantation crops like pepper and cardamom have also been taken up on a small scale.	December to January.	The Senior Assistant Director of Agriculture, Chikmagalur.
7. The Ajjampur Cattle Breeding Station.	About a mile from Ajjampur, a railway station on the Mysore-Poona line P. O. Ajjampur	Breeding of Amrit Mahal Cattle. A part of the sheep breeding work of the department is also carried out here.	October to December.	The Live Stock Expert, Bangalore.
8. The Yellachihalli Sheep Farm.	Yellachihalli village, about 14 miles from Mysore, Mercara Road. P. O. Yelwal. Mysore District.	Sheep breeding.	August to October.	Do
9. Irwin Canal Farm.	Seven miles from Mandya Railway Station.	Experimental demonstration and seed supply work connected with sugar-cane, paddy and other crops connected with the Irwin Canal Area.	October and November.	Director of Agriculture, Bangalore.

Holidays	English Dates	Days of the week	Dates: Chandramana	Dates: Sowramana	Thithies in Ghaliges and Vighaliges		Nakshatras in Ghaliges and Vighaliges	
	1	Thursday	9	16	Navami	... 31 25	Poorvabhadra	... 31 2
	2	Friday ...	10	17	Dasami	... 33 57	Uttarabhadra	... 34 1
	3	Saturday	11	18	Ekadasi	... 33 50	Revathi	... 33 4
	4	Sunday ...	12	19	Dwadasi	... 32 33	Asvini	... 33
	5	Monday ...	13	20	Trayodasi	... 30 10	Bharani	... 35 1
	6	Tuesday ...	14	21	Chaturdasi	... 26 39	Krithika	... 33 1
	7	Wednesday	15	22	○ Pournima	... 22 31	Rohini	... 30 3
								MARGASIRA
	8	Thursday	1	23	Padya	... 17 29	Mrigasira	... 27 1
	9	Friday ...	2	24	Bidige	... 12 5	Aridra	... 23 2
	10	Saturday	3	25	Tadige	... 6 22	Punarvasu	... 19 2
	11	Sunday ...	4—5	26	Chouti Panchami	... 0 28 ... 54 41	Pushya	... 15 1
	12	Monday ...	6	27	Shashti	... 49 8	Aslesha	... 10 1
	13	Tuesday ...	7	28	Sapthami	... 44 7	Makha	... 7 3
	14	Wednesday	8	29	Ashtami	... 39 50	Pubba	... 4 2
				Dha	nussu.			
	15	Thursday	9	1	Navami	... 36 21	Uttara	... 2
	16	Friday ...	10	2	Dasami	... 33 56	Hastha Chitta	... 0 2 ... 59 5
	17	Saturday	11	3	Ekadasi	... 32 34	Swathi	... 60
	18	Sunday ...	12	4	Dwadasi	... 32 49	Swathi	... 0
	19	Monday ...	13	5	Trayodasi	... 33 48	Vishaka	... 1 1
	20	Tuesday ...	14	6	Chaturdasi	... 36 26	Anuradha	... 3 2
	21	Wednesday	30	7	● Amavasya	... 40 2	Jeshta	... 10 1
								PUSHY
	22	Thursday	1	8	Padya	... 44 38	Moola	... 15 3
	23	Friday ...	2	9	Bidige	... 49 42	Poorvashada	... 21
	24	Saturday	3	10	Tadige	... 54 59	Uttarashada	... 28
	25	Sunday ...	4	11	Chouthi	... 60 0	Sravana	... 36 2
	26	Monday ...	4	12	Chouthi	... 0 3	Dhanishta	... 40 2
	27	Tuesday ...	5	13	Panchami	... 4 37	Satabisha	... 42 3
	28	Wednesday	6	14	Shashti	... 8 13	Poorvabhadra	... 49 5
	29	Thursday	7	15	Sapthami	... 10 38	Uttarabhadra	... 52 5
	30	Friday ..	8	16	Ashtami	... 12 5	Revathi	... 54 4
	31	Saturday	9	17	Navami	... 12 6	Asvini	... 55 2

Yogams	Feasts, Festivals, Government Holidays and Rainfall according to Nakshatras	Dates of Cattle Fairs, Cattle Shows, Agricultural Exhibitions and other useful notes
Vajra ...		Sunrise 6-28 A.M.
Siddhi ...	Jeshta rain 1st pada.	
Vyathipatha ...		
Variyan ...		
Parigha ...	Jeshta rain 2nd pada.	
Siva ...		
Siddha ...		
SAHULA.		
Sadhya ...		
Subha ...		
Sukla ...	Jeshta rain 3rd pada.	
Brahma ...	Maddurammana Jatra.	Upparahalli, Hosakote Taluk
Mahendra ..		
Vaidhriti ...	Jeshta rain 4th pada.	
Vishkambha ...		
Preeti ...		
Ayushman ...	Moola rain 1st pada.	Rangasthala-Chikballapur Taluk.
Sowbhagya ...		
Sobhana ...		
Atiganda ...		
Sukarma ...		
Dhriti ...	Moola rain 2nd pada.	
Shoola ...		
Ganda ...		
SHUDDA.		
Vriddhi ...	Moola rain 3rd pada.	
Dhruva ...		
Vyaghata ...	Christmas Holidays from 24th to 31st inclusive.	
Harsha ...	Moola rain 4th pada.	
Vajra ...		
Siddhi ...		
Vyathipatha ...	Poorvashada rain 1st pada.	
Variyan ...		
Parigha ...		
Siva ...		

DECEMBER 1938.

MONTHLY NOTES.

DRY LANDS.

Soon after the dry crop of ragi or jola is harvested, the field should be ploughed up immediately. In this way, the moisture in the lower layers of the soil will be protected from the drying action of the sun and wind. The soil will be in a fit condition to receive and soak up the early rains of April and May, and thereby to enable us to start *mungar* ploughing early, or sow an early *mungar* crop like those specified in the notes under May (*q. v.*). The soil will weather well, which as many raiyats know, is equivalent to applying manure, the roots of weeds will be killed, and the pupæ of insects destroyed.

This ploughing is a very important operation for dry lands, for in a year of poor rainfall, it will help to tide the crop over the drought. It should therefore be attempted notwithstanding difficulties, such as the presence of the *akkadi* or subordinate crop, the hardness of the soil, etc. Immediately after harvest, the soil will be moist enough to plough or disc, and, at that time, it will be also possible to dodge the rows of the mixed crop in ploughing.

SEED STORAGE.

From this month onwards, grains, pulses, etc., will be put in store. See all are thoroughly sun-dried before storage. Store preferably in bins with narrow mouths. When the grains and pulses are well settled down treat as follows: In the case of pulses, put on top a layer of sand 1 inch thick, weevils emerging from the pulses will come through the sand but will fail to return and so fail to reproduce. In the case of paddy, use a mixture of chunam powder and sand half and half. In both cases, there should be an opening at the side down below for withdrawal from time to time. When the grains and pulses are so withdrawn, the top layer of sand or sand and chunam is likely to be disturbed. See that it is set right each time.

POTATO.

Materials for spraying potato against its pests and diseases must have been bought by now and the crop should be sprayed in time. (*Vide* Notes under July).

DEPARTMENT OF AGRICULTURE IN MYSORE, BANGALORE.

STAFF.

DIRECTION.

'. G. Rama Iyer, B.A., Director of Agriculture.
'enkata Rao K. Badami, L.Ag., Ph.D. (Cantab.), Deputy Director.
3. Sankara Rao Badami, M.A., Headquarter Assistant.
I. Srinivasia, Offg. Manager.

Publication and Library.

I. Venkatasubbaiya, Agricultural Inspector in charge of Kannada Publications, Secretary, Agricultural and Experimental Union and Officer in charge, Library.

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3. T. Narayanan, B.A., Ph.D., D.I.C., Bio-Chemist.
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). Hanumanthiah, B.A., B.Ag., Assistant Chemist.
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. Ramaswamy Sastry, Analyst (O. O. D. Mysore City Municipality).
G. P. Krishnaiyengar, B.Sc., Analyst.
S. Ramanujaiyengar, B.Sc., Analyst (O. O. D. United Planters' Association of South India).
3. Bhimasena Rao, B.Sc., Analyst (Offg.)
K. R. Anantaramiah, B.A., Analyst (Offg.)
). Venkataramaniah, Agricultural Inspector.
K. Lakshminarayana Bhatta, B.Sc., Assistant Chemist, Fish Poisons Scheme.

MYCOLOGICAL SECTION.

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. V. Venkatarayan, B.A., Senior Assistant Mycologist
). Gundu Rao, B.Sc., Juinor Assistant Mycologist.
N. S. Venkatakrishniah, B.Sc., Junior Assistant Mycologist.

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. Shadagopa Mudaliar, Assistant Artist.

ENTOMOLOGICAL SECTION.

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. Krishnamurthy, B.Sc., Senior Assistant Entomologist.
). Seshagiri Rao, B.Sc., Junior Assistant Entomologist (Mandya).
M. A. Abdur Rubb, B.Sc., Junior Assistant Entomologist.
M. Puttarudriah, B.Sc. (Hons.), Junior Assistant Entomologist (Fish Poison Scheme).

Botanical Section.

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R. S. Iyengar, B.Ag., Agricultural Inspector, Hebbal Agricultural School.
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Imperial Research Council Sugarcane Scheme.

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M. L. Subbanna, B.Sc. (Hons.), Junior Assistant Botanist.
G. Srinivasa Iyengar, M.Sc., Junior Assistant Botanist, Mysore Doddahatti Scheme.
S. G. Narasimhachar, M.Sc., Field Assistant, Mysore Doddahatti Scheme.

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B. Dasappa, B.A., B.Ag., Ph.D., Assistant Director, Mysore.
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T. J. Narasoji Rao, do Tiptur.
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S. Rangaswamy do Mysore.
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LIST OF AVAILABLE PUBLICATIONS OF THE DEPARTMENT OF AGRICULTURE IN MYSORE, BANGALORE.

ANNUAL REPORTS.

Annual Report of the Agricultural Department		1927–28	
Do	do	1928–29	
Do	do	1931–32	
Do	do	1932–33	
Do	do	1933–34	
Do	do	1935–36	
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THE MYSORE AGRICULTURAL CALENDARS.

English Calendars for the years 1919 and from	1929 to 1931
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CIRCULARS.

16. Kondalihula of Castor, in Kannada only.
17. Kokkre Roga of Paddy, in Kannada only.
23. Kamblihula with Black head, in Kannada only.
30. List of Books available for lending from the Library of the Department of Agriculture in Mysore. (English only.)
31. Cattle Breeding (English and Kannada).
32. Pony Breeding (English and Kannada.)
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43. Jola Grasshopper. (Do).
44. Spraying against Coffee Black Rot or Koleroga. (Kannada.)
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Mysore Coffee Experimental Station Circulars.

(i) Report on the Disease Situation in Coffee Areas in 1933.
(ii) Vegetable oils as Spreaders for Bordeaux mixture.
(iii) Souvenir Hand-Book of the Coffee Experiment Station, Balehonnur.
(iv) Preservation of Coffee baskets in the nursery. (English and Kannada).

Irwin Canal Soil Survey Report Series.

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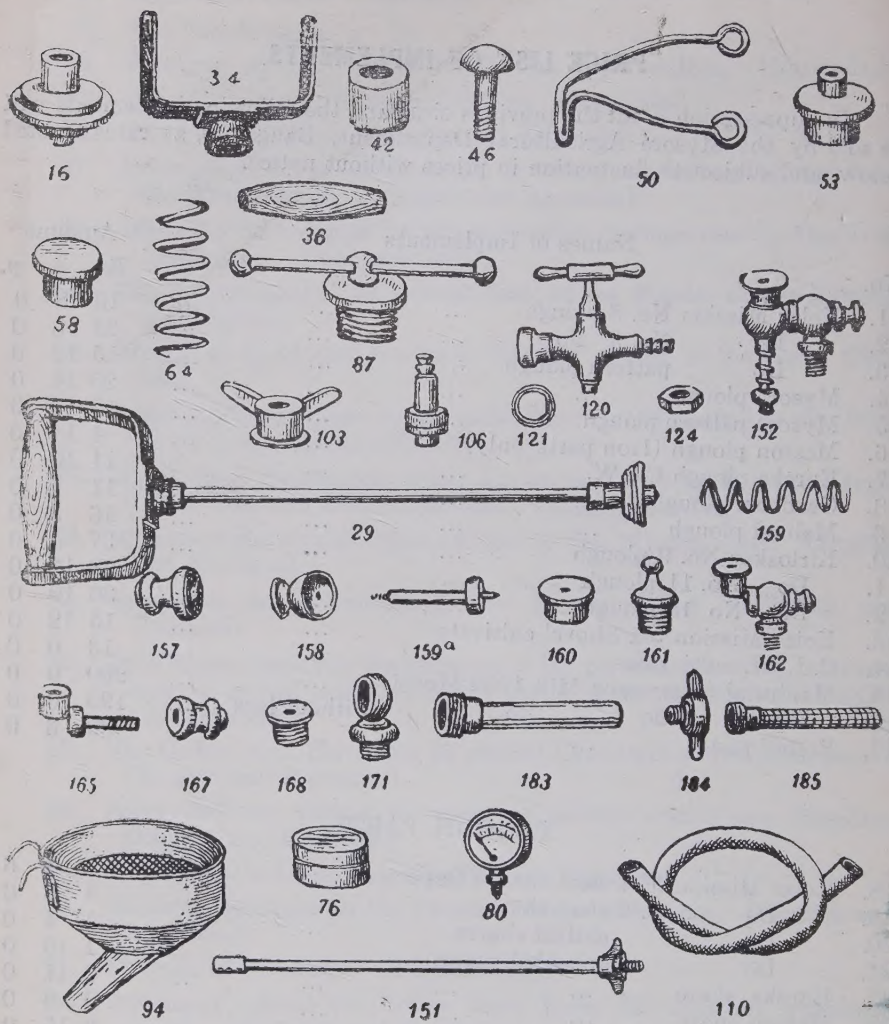
18.	Kolar Mission F. 4 steel share (Imported)	4	1	6
19.	Do F. 6 steel share	4	8	0
20.	Do chilled shares	1	4	0
21.	Do annealed shares	1	10	0
22.	Eureka share	0	11	0
23.	Meston share	0	8	0
24.	Mysore plough share	2	15	0
25.	Mysore pattern plough share	1	6	0
26.	K. M. pattern plough steel share	3	2	0
27.	K. M. pattern plough land side	0	14	0
28.	K. M. pattern plough mould board	1	11	0
29.	Mysore pattern plough mould board	2	4	0
30.	Mysore pattern plough land side	1	0	0
31.	Mysore plough bar point	1	5	0
32.	Mysore pattern plough bar point	1	2	0
33.	Verity share	1	6	0
34.	Kir. No. 9 share	1	7	0

PRICE LIST OF SPARE PARTS FOR HOLDER SPRAYERS.



No.		Rs.	a.	p.
16	...	1	1	0
29	...	1	11	0
42	...	0	6	6
46	...	0	1	0
50	...	0	2	0
53	...	1	6	0
58	...	0	8	0
Rubber plug for 58		0	4	0
64	...	0	4	0
80	...	1	14	0
87	...	2	3	0
94	...	1	11	0
103	...	0	7	0
106	...	0	7	0
120	...	2	0	0
121	...	0	3	0
124	...	0	2	0
151	...	1	12	0
152	...	1	0	0

No.		Rs.	a.	p.
151A	...	2	4	0
161	...	0	6	0
165	...	0	12	0
167	...	0	4	0
168	...	0	5	0
171	...	0	14	0
183	...	0	14	0
184	...	0	12	0
185	...	0	6	0
Meter plugs	...	0	2	0
Lid washers	...	0	0	6
Washer sets	...	0	4	0
Washer sets local	...	0	1	3
Handles for 2 gallon sprayers		0	6	0
Hose per foot	...	0	5	0
Nozzle caps	...	0	8	0
New nozzles	...	2	4	0
No. 162	...	2	0	0

WD 1285—GPB—400—9-3-38.

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Wherever this devastating disease prevails efficiency is impaired, working costs and labour difficulties are increased and profits diminished.

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